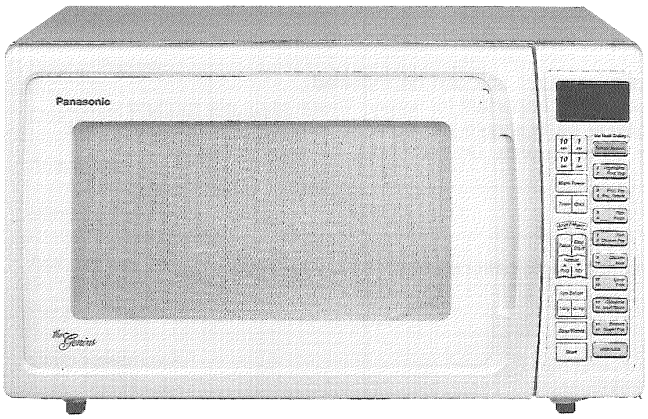
ORDER NO. MMCA9607013 C3
E1

Service Manual

Microwave Oven



MODELS	QPQ	JPG	VPE
NN-S546WA	○	○	○
NN-S566WA	○	○	–
NN-S576WA	○	○	○
NN-S646BA	○	–	–
NN-S646WA	○	○	○
NN-S676BA	○	○	–
NN-S676WA	○	–	○
NN-S686WA	○	○	–
NN-S786WA	○	○	○

Models sold in these markets:
QPQ - Australia
JPG - New Zealand
VPE - South Africa

Specifications:

Models:	NN-S546WA, S566WA, S576WA	NN-S646BA/WA, S676BA/WA, S686WA	NN-S786WA
Power Source:	240 V AC Single Phase, 50 Hz ••••• For QPQ Models 230 V AC Single Phase, 50 Hz ••••• For JPG Models 220 V AC Single Phase, 50 Hz ••••• For VPE Models		
Power Requirements:	1400W (6.2A)•••QPQ/JPG Models	1600W (7.0A)•••QPQ/JPG Models	1600W (7.0A)•••QPQ/JPG Models
Power Requirements:	1450W (6.9A)•••VPE Models	1630W (7.6A)•••VPE Models	1660W (7.9A)•••VPE Models
Output: (IEC705-88)	930W	1000W	1000W
Microwave Frequency:	2,450MHz	2,450MHz	2,450MHz
Timer:	99 min. 99 sec.	99 min. 99 sec.	99 min. 99 sec.
Outside Dimensions:	20" (W) X 14 3/16" (D) X 12" (H) 510mm (W) X 360mm (D) X 306mm (H)	21 7/8" (W) X 16 3/4" (D) X 12" (H) 555mm (W) X 425mm (D) X 306mm (H)	23 7/16" (W) X 16 5/16" (D) X 14" (H) 595mm (W) X 415mm (D) X 356mm (H)
Inside Dimensions:	13 7/8" (W) X 13 5/16" (D) X 9" (H) 353mm (W) X 338mm (D) X 229mm (H)	14 3/4" (W) X 15 9/16" (D) X 8 5/8" (H) 375mm (W) X 395mm (D) X 220mm (H)	16 5/16" (W) X 15 1/8" (D) X 10 3/16" (H) 415mm (W) X 385mm (D) X 259mm (H)
Weight:	34 lbs/15.3 kg	38 lbs/17 kg	40 lbs/18 kg
Output power: IEC705-88 Test procedure			
Specifications subject to change without notice			

Panasonic®

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

WARNING

1. This product should be serviced only by trained qualified personnel.
2. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakage".
3. If the unit cannot be repaired on site, advise the customer not to use until unit can be repaired.
4. There are special components used in the microwave oven which are important for safety. These parts are marked with a ⚠ on the replacement parts list. It is essential that these critical parts should be replaced only with the manufacturer's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the original design.

This service manual covers products for following markets.
When troubleshooting or replacing parts, please refer to the country identifications shown below for your applicable product specification.

QPQ••••••••••••••••••••For Australia
VPE••••••••••••••••••••For South Africa
JPG••••••••••••••••••••For New Zealand

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(A) Do not operate or allow the oven to be operated with the door open.
(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
  (1) Interlock operation
  (2) Proper door closing
  (3) Seal and sealing surfaces (arcing, wear, and other damage)
  (4) Damage to or loosening of hinges and latches.
  (5) Evidence of dropping or abuse
(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.
(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

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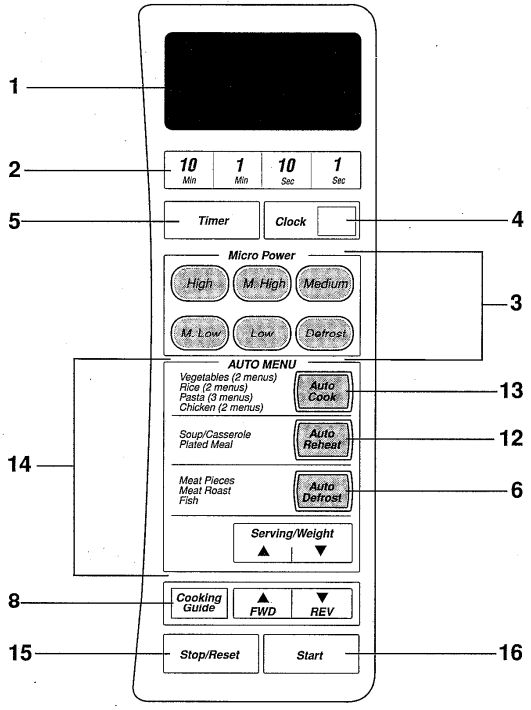
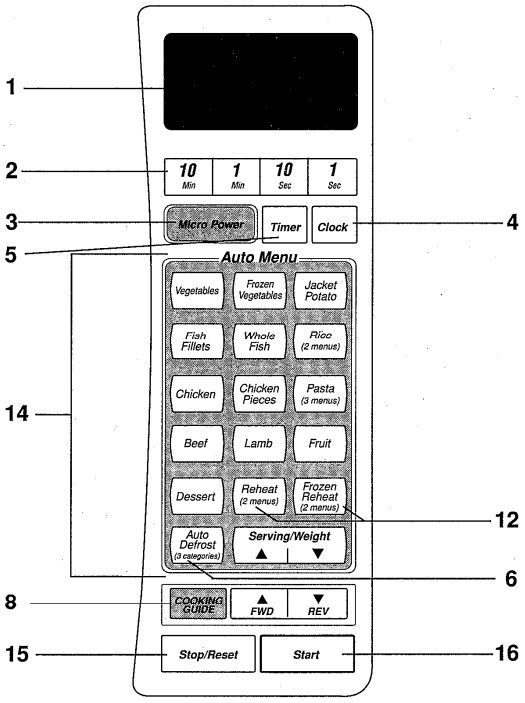
FEATURE CHART

FEATURE \ MODELS	NN-S546WA NN-S566WA	NN-S646BA NN-S646WA	NN-S576WA	NN-S676BA NN-S676WA	NN-S686WA NN-S786WA
Three Stage Cooking	○	○	○	○	○
Auto Defrost	○	○	○	○	○
Sensor Reheat	–	–	○	○	○
One Touch Cooking (Sensor)	–	–	○ 8 Menu	○ 8 Menu	○ 16 Menu
Auto Menu	○	–	–	–	–
Micro Power	○	○	○	○	○
Auto Reheat	○	○	–	–	–
Recipe Prompting	–	○	–	○	○
Child Safety Lock	○	○	○	○	○
Operating Guide on the Display	○	○	○	○	○
Delay Start	○	○	○	○	○
Timer/Stand	○	○	○	○	○
Digital Clock	○	○	○	○	○

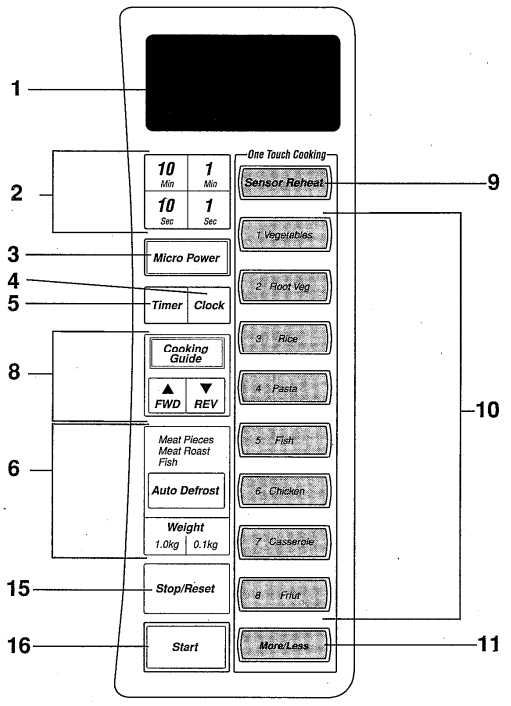
CONTROL PANELS



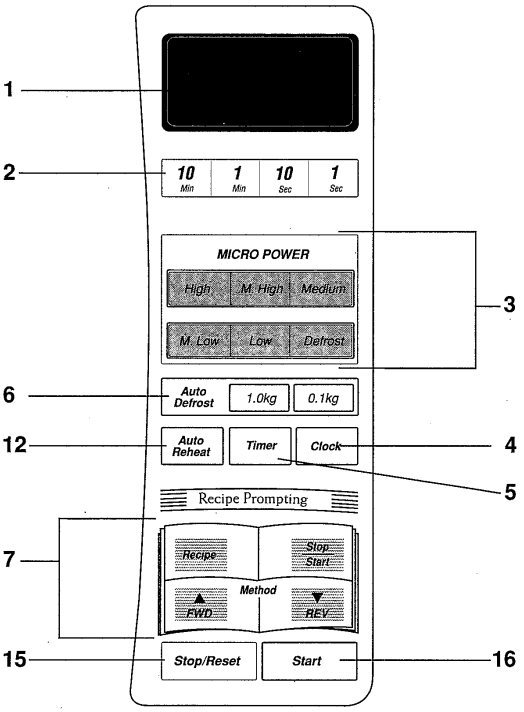
NN-S546WA



NN-S566WA

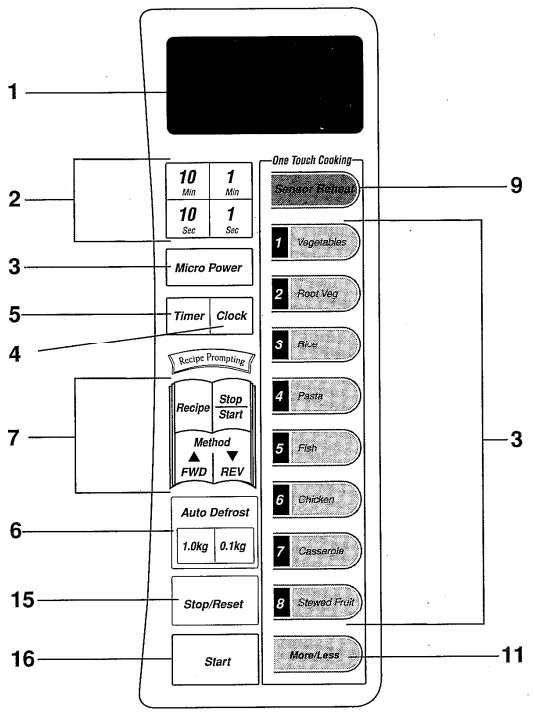


NN-S576WA

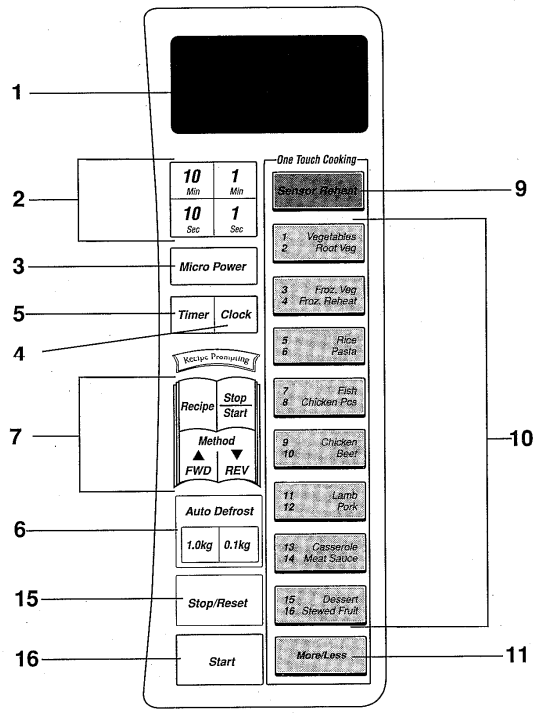


NN-S646WA/BA

CONTROL PANELS



NN-S676WA/BA



NN-S686WA/
NN-S786WA

(1) Display Window
(2) Time Pads
(3) Micro Power Pad(s)
(4) Clock Pad
(5) Timer Pad
(6) Auto Defrost Pads
(7) Recipe Prompting Pads
(8) Cooking Guide
(9) Sensor Reheat Pad
(10) One Touch Cooking Pads
(11) More/Less Pad
(12) Auto Reheat Pad
(13) Auto Cook Pad
(14) Auto Menu Pads
(15) Stop/Reset Pad

Before cooking: One tap clears your instructions.
During cooking: One tap temporarily stops the cooking process. Another tap cancels all your instructions and time of day appears in the display window.

(16) Start Pad

One tap allows oven to begin functioning. If door is opened or STOP/RESET Pad is pressed once during oven operation, START Pad must again be pressed to restart oven.

Word Prompters

When pads are pressed, a beep sound is heard and the corresponding letter or word(s) appear and roll across the window. If a pad is pressed and no beep is heard, the unit does not or cannot accept the instruction. As each pad is pressed the corresponding word(s) roll across the window. Words will automatically appear to prompt the user to perform the next step. It is not necessary to wait for the words to appear before pressing pads for the next step. A two beep sound is heard between stages. At the end of any complete program, the oven will beep five times and "ENJOY YOUR MEAL" will appear in the display window.

OPERATION AND DIGITAL PROGRAMMER CIRCUIT TEST PROCEDURE

Operation Guide on the display:

To assist you in programming, the next operation will appear on the display. When you get used to operating the oven, you can turn off the operating guide.

To turn off:

Timer → OPERATING GUIDE OFF

Press 3 times

To turn on:

Timer → OPERATING GUIDE ON

Press 3 times

1. To Set Clock

OPERATION	SCROLL DISPLAY
1. Plug the power supply cord into wall outlet.	*WELCOME TO WORD PROMPTING*
2. Press Clock pad.	✳ *——SET TIME*
3. Enter time of day (TOD) by pressing appropriate Time pads.	*11:25* *——PRESS CLOCK*
4. Press Clock pad. TOD has now been registered into the digital programmer circuit and will count up by minutes.	*11:25*

OPERATION	DISPLAY
5. Set for 1 minute by pressing Time pad.	*1 00* *MIN SEC* *——PRESS START* *MEDIUM*
6. Press Start pad.	↻ *5* *SEC*
7. When 1st stage cooking time has elapsed, oven beeps twice and automatically switches to 2nd stage cooking.	↻ *1 00* *MIN SEC*
8. When 2nd stage cooking time has elapsed, oven beeps 5 times and shuts off.	*ENJOY YOUR MEAL* *11:25*

2. Time Cooking for Two Stage

OPERATION	DISPLAY
1. Place a water load in the oven.	
2. Press Micro Power pad once to set High power. (1st stage)	*HIGH* *——SET TIME*
3. Set for 5 seconds by pressing Time pad.	*5* *SEC* *——PRESS START* *HIGH*
4. Press Micro Power pad 4 times to set Medium power. (2nd Stage)	*MEDIUM* *——SET TIME*

3. Auto Weight Defrost

OPERATION	DISPLAY
1. Press Auto Defrost pad. once for meat pieces, twice for meat roast, three times for fish.	*AUTO DEFROST* *——SET WEIGHT*
2. Set the weight for 1 kg by pressing 1.0 kg pad or Weight ▲▼ pad in some models	*1.0 KG* *——PRESS START*
3. Press Start pad. NN-S5_6 → NN-S6_6 → NN-S786 →	↻ *26 40* MIN SEC ↻ *25 40* MIN SEC ↻ *23 40* MIN SEC
4. Press Stop/Reset pad twice. Oven shuts off. (Time of day or colon appears on the display.)	*11:25*

4. Demonstration Mode

The demonstration mode is designed for retail store display. It is not designed for home use. Cooking will not operate during demonstration mode.
To set demonstration mode:

OPERATION	SCROLL DISPLAY
1. Press Clock pad 3 times continuously. Note: To cancel demonstration mode, press Clock pad 3 times continuously.	*WELCOME TO WORD PROMPTING* *– – PRESS ANY KEY*

5. To Set Child Safety Lock

OPERATION	SCROLL DISPLAY
1. Press Start pad 3 times continuously. "*LOCK" appears on the display.	**LOCK*

6. To Reset Child Lock

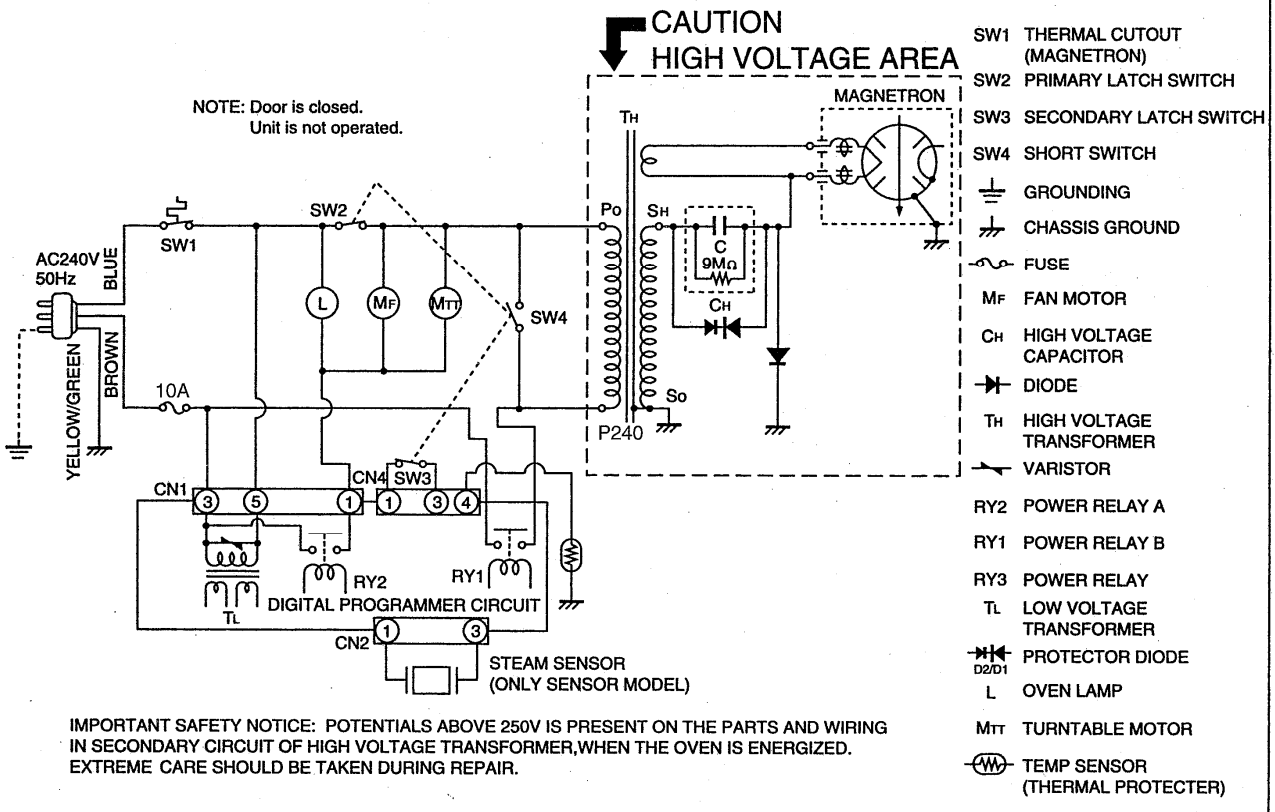
OPERATION	SCROLL DISPLAY
1. Press Stop/Reset pad 3 times continuously. Time of day or colon appears on the display	*11:25*

7. Sensor Cooking

NOTE: Make sure that the outer panel is installed before Sensor cooking test, since Sensor function does not operate properly without the outer panel.

OPERATION	SCROLL DISPLAY
1. Pour 150 ±15cc (4.5±1/2ozs) of room temperature water in a beaker, place the beaker in the center of the oven.	
2. Press the desired Sensor Cooking Category pad. e.g. Set to Sensor Reheat	*SENSOR REHEAT* *——PRESS START*
3. Press Start pad.	*AUTO*
4. The steam sensor detects steam about 1.5 to 4 minutes after the Start pad is pressed. Sensor cooking (T1) automatically switches to time cooking (T2). "Auto" disappears with beep sounds and the remainder of cooking time appears in the display window. NOTE: Cooking time will vary depending on the water temperature, the shape of the beaker or the power source voltage.	*8 SEC* *23 SEC*
5. When the balance of cooking time has elapsed, oven stops and beeps 5 times.	*ENJOY YOUR MEAL* *11:25*

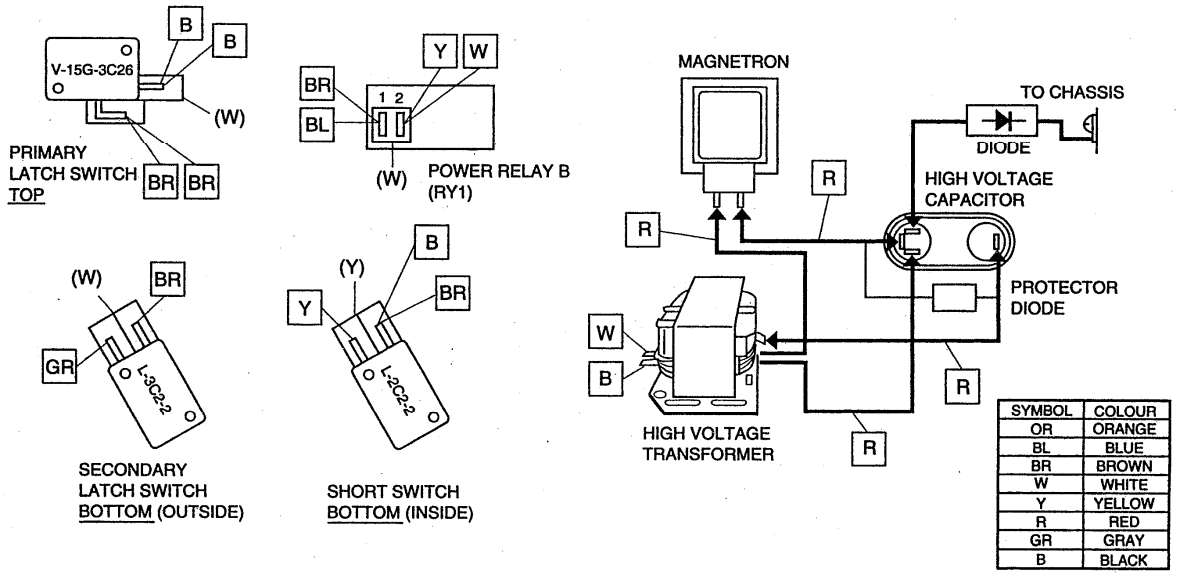
SCHEMATIC DIAGRAM (FOR QPQ MODELS)



IMPORTANT SAFETY NOTICE: POTENTIALS ABOVE 250V IS PRESENT ON THE PARTS AND WIRING IN SECONDARY CIRCUIT OF HIGH VOLTAGE TRANSFORMER,WHEN THE OVEN IS ENERGIZED. EXTREME CARE SHOULD BE TAKEN DURING REPAIR.

WIRING DIAGRAM

NOTE: *When replacing, check the lead wire colour as shown.
*Colours shown by ( ) indicate colours of lead wire connector housing.

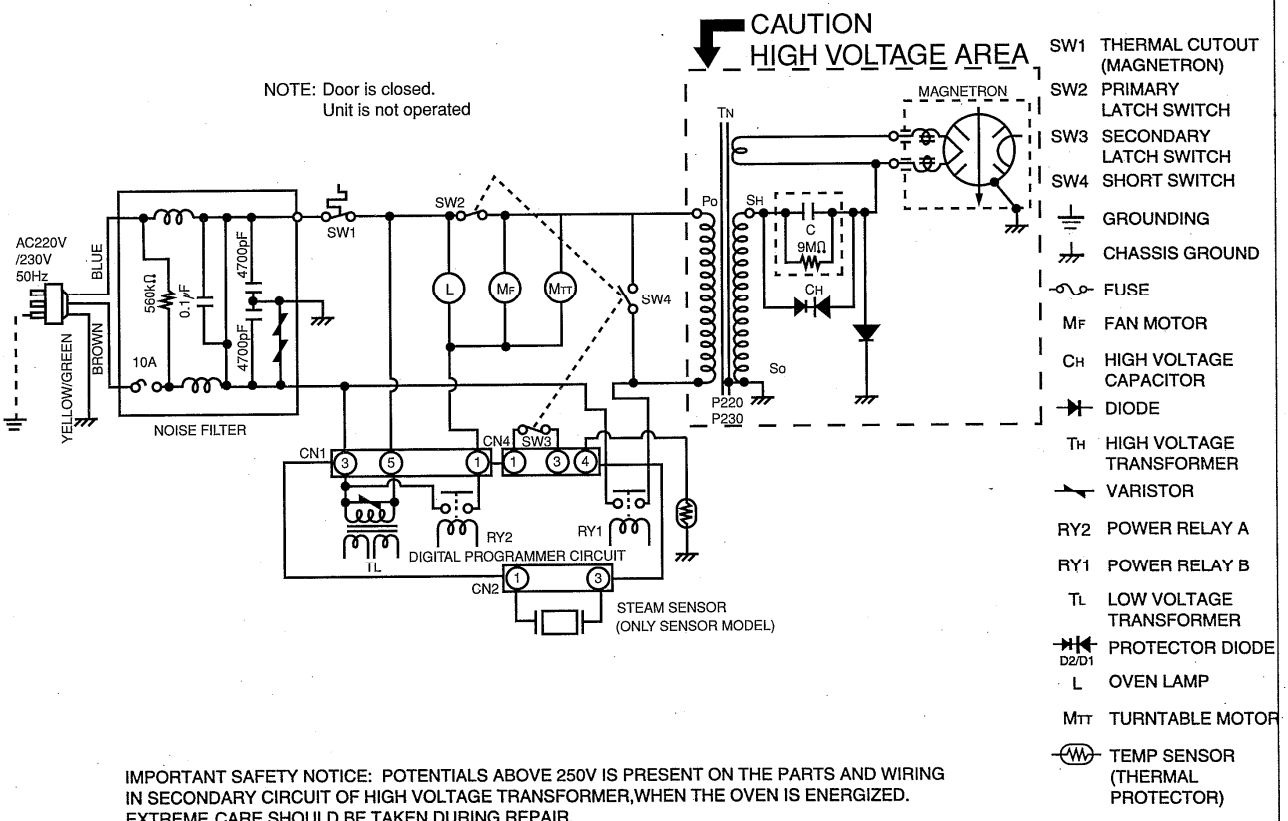


SYMBOL	COLOUR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-828H QPQ

M001

SCHEMATIC DIAGRAM (JPG/VPE Models)



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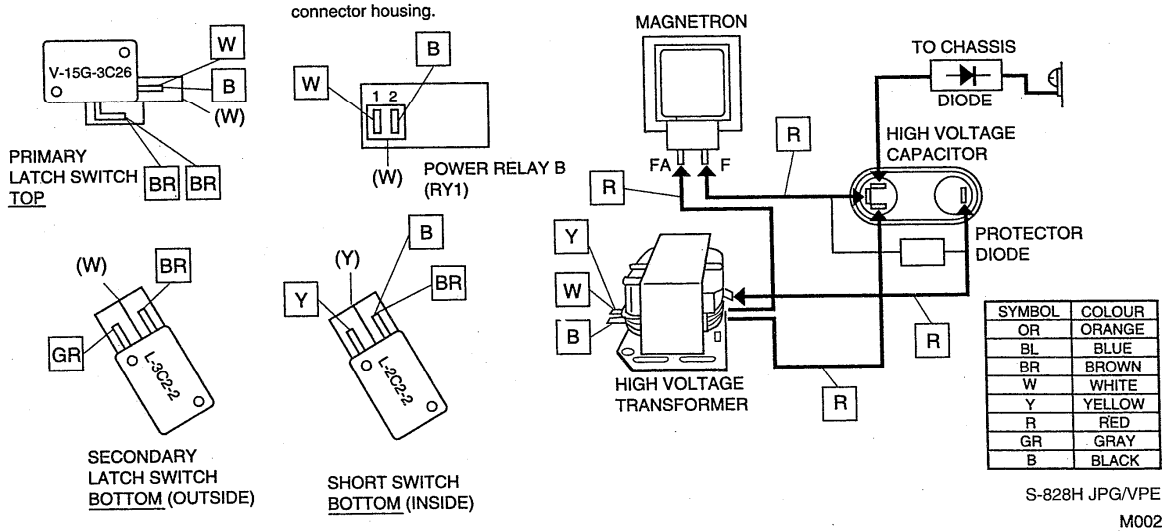


SYMBOL	COLOUR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-828H JPG/VPE
M002

DESCRIPTION OF OPERATING SEQUENCE

1. Variable power cooking control

The coil of power relay B (RY1) is energized intermittently by the digital programmer circuit, when the oven is set at any power selection except for High power position. The digital programmer circuit controls the ON-OFF time of power relay B contacts in order to vary the output power of the microwave oven from "Low" to "High" power. One companies ON and OFF cycle of power relay B is 22 seconds. The relation between indications on the control panel and the output of the microwave oven is as shown in table.

NOTE: The ON/OFF time ratio does not correspond with the percentage of microwave power since approximately 2 seconds are required for heating of magnetron filament.

POWER SETTING	OUTPUT POWER (%) APPROX.	ON-OFF TIME OF POWER RELAY B (RY1)	
		ON (SEC)	OFF (SEC)
HIGH	100%	22	0
MEDIUM-HIGH	80%	17	5
MEDIUM	60%	13	9
MEDIUM-LOW	35%	8	14
LOW	20%	5	17
DEFROST	35%	8	14

2. Auto Defrost, Auto Reheat, Auto Cook control

When those Auto Control features are selected and the Start Pad is tapped:

(A) The digital programmer circuit determines the power level and cooking time to complete cooking and indicates the operating state in the display window. Table shows the corresponding cooking times for respective serving by categories.

(B) When cooking time in the display window has elapsed, the oven turns off automatically by a control signal from the digital programmer circuit.

Auto Defrost (NN-S546WA, NN-S566WA, NN-S576WA)

WEIGHT SELECTED	COOKING TIME		
	Meat Pieces	Meat Roast	Fish
1.0 kg	15 min. 40 sec.	26 min. 40 sec.	25 min.

Auto Defrost

WEIGHT SELECTED	COOKING TIME	
	MODELS NN-S646BA/WA NN-S676BA/WA NN-S686WA	MODELS NN-S786WA
1.0 kg	25 min. 40 sec.	23 min. 40 sec.

Auto Reheat (NN-S546WA, NN-S566WA)

MENU	SELECTED SERVINGS/ WEIGHT		COOKING TIME
SOUP/CASSEROLE	1	250g	2 min. 20 sec.
	2	450g	3 min. 00 sec.
	4	850g	6 min. 00 sec.
PLATED MEAL	1	250g	2 min. 40 sec.
	2	450g	4 min. 20 sec.
	4	850g	6 min. 50 sec.

Auto Reheat (NN-S646BA/WA)

SELECTED SERVINGS/WEIGHT		COOKING TIME
1	280g	2 min. 00 sec.
2	480g	3 min. 40 sec.
4	880g	6 min. 10 sec.

3. One Touch Cooking (Auto Sensor Cooking) (NN-S576WA, NN-S676WA/BA, NN-S686WA, NN-S786WA Only)

Auto sensor cooking is a revolutionary way to cook by microwave without setting a power level or selecting a time.

All that is necessary is to select an Auto Sensor Program before starting to cook.

Understanding Auto Sensor Cooking

As the food cooks, a certain amount of steam is produced. If the food is covered, this steam builds up and eventually escapes from the container. In Auto Sensor Cooking, a carefully designed instrument, called the steam sensor element, senses this escape of steam. Then, based upon the Auto Sensor Program selected, the unit will automatically determine the correct power level and the proper length of time it will take to cook the food.

NOTE: Auto Sensor Cooking is successful with the foods and recipes found in the Auto Sensor Cooking Guide. Because of the vast differences in food composition, items not mentioned in the Cooking Guide should be prepared in the microwave oven using power select and time features. Please consult Variable Power Microwave Cookbook for procedures.

Explanation of the Auto Sensor Cooking process

1) During the first 10 second period there is no microwave activity, and when calculating the T2 time by using the formula below make sure this 10 seconds is subtracted from the T1 time. In other words T1 time starts at the end of the 10 second period.
2) T1 time...The total amount of time it takes the microwave oven to switch to T2 time after the 10 second period.
3) T2 time...When the steam escapes from the cooking container placed in the oven, the steam sensor detects it and the microprocessor calculates the balance of cooking time. This T2 time is then shown in the display and begins counting down.

Balance of cooking time (T2 time)

The balance of cooking time which is called T2 time, can be calculated by the following formula.

T2 time (in sec.)=T1 time X K factor

NOTE: Remember, the T1 time starts after the 10 second period. The coefficient K is programmed into the microprocessor memory and they are listed in the following tables along with the P1 and P2 powers.

NOTE: When "More" or "Less" pad is selected, the K factor varies resulting in T2 time to be increased or decreased.

Example of calculating the T2 time

Example 1: If the T1 time is measured to be 2 minutes and 40 seconds after the 10 second period, and the Auto program selected is Vegetables:

T2 = T1 X K
= 2 min. and 40 sec. X 0.3
= 160 sec. X 0.3
= 48 sec.

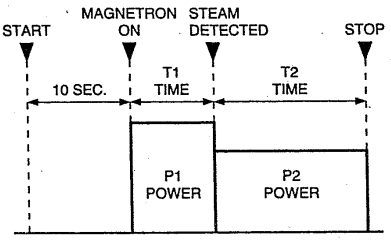
4. Sensor Reheat (NN-S576WA, NN-S676WA/BA, NN-S686WA, NN-S786WA Only)

Auto Sensor Reheat is a quick and easy way to reheat refrigerator and room temperature foods.

Simply press the reheat pad. There is no need to select power level and cooking time.

NOTE: The Auto Sensor Reheat process is same as Auto Sensor Cooking process.

AUTO SENSOR COOKING/REHEAT PROCESS



Auto Sensor Cooking (One Touch Cooking Models)

Category	P1 Power	P2 Power	K Factor Standard
Vegetables	HIGH	HIGH	0.3

Sensor Reheat (All Sensor Models)

Category	P1 Power	P2 Power	K Factor Standard
Sensor Reheat	HIGH	M. HIGH	0.1

CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

CAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

1. Check the grounding

Do not operate on a 2-wire extension cord. The microwave oven is designed to be used when grounded. It is imperative, therefore, to make sure it is grounded properly before beginning repair work.

2. Warning about the electric charge in the high voltage capacitor

For about 30 seconds after the oven is turned off, an electric charge remains in the high voltage capacitor.

When replacing or checking parts, remove the power plug from the outlet and short the terminal of the high voltage capacitor (terminal of lead wire from diode) to chassis ground with an insulated handle screwdriver to discharge.

WARNING

There is high-voltage present, with high-current capabilities in the circuits of the high voltage winding and filament winding of the high voltage transformer. It is extremely dangerous to work on or near these circuits with oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

WARNING

Never touch any circuit wiring with your hand nor with an insulated tool during operation.

3. When parts must be replaced, remove the power plug from the outlet.

4. When the 10 Amp fuse is blown due to the operation of short switch:

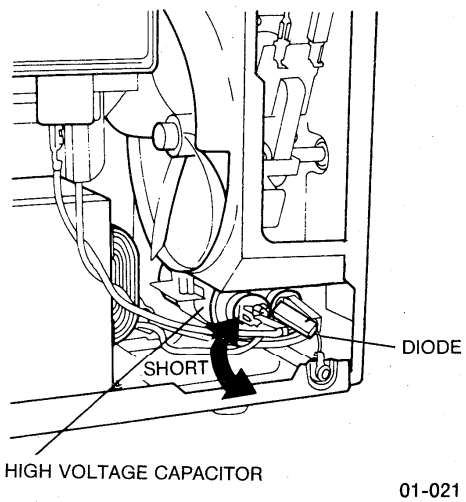
WARNING

When the 10 Amp. fuse is blown due to the operation of short switch, you must replace Primary latch switch and short switch. Also replace power relay B (RY1) when the continuity check reads shorted contacts (1-2).

(A) This is mandatory. Refer to "Adjustments and Measurement" for these switches.
(B) When replacing the fuse, confirm that it has the appropriate rating for these models.
(C) When replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.

5. Avoid inserting nails, wire, etc. through any holes in the unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any other holes or gaps, because such objects may work as an antenna and cause microwave leakage.



01-021

Touch chassis side first then short to the high voltage capacitor terminal.

6. Confirm after repair

(A) After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loose nor missing.
Microwaves might leak if screws are not properly tightened.
(B) Make sure that all electrical connections are tight before inserting the plug into the wall outlet.
(C) Check for microwave energy leakage. (Refer to procedure for measuring microwave energy leakage.)

CAUTION

MICROWAVE RADIATION

DO NOT BECOME EXPOSED TO RADIATION FROM THE MICROWAVE GENERATOR OR OTHER PARTS CONDUCTING MICROWAVE ENERGY.

IMPORTANT NOTICE

1. The following components have potentials above 250V while the appliance is operated.
   - ✻ Magnetron
   - ✻ High voltage transformer
   - ✻ High voltage diode
   - ✻ High voltage capacitor
   - ✻ Protector diode

   Pay special attention on these portions.
2. When the appliance is operated with the door hinge or magnetron fixed incorrectly, the microwave leakage can reach more than 5mW/cm^3. After repair or exchange, it is very important to check if magnetron and the door hinge is correctly fixed.

DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE

1. Magnetron

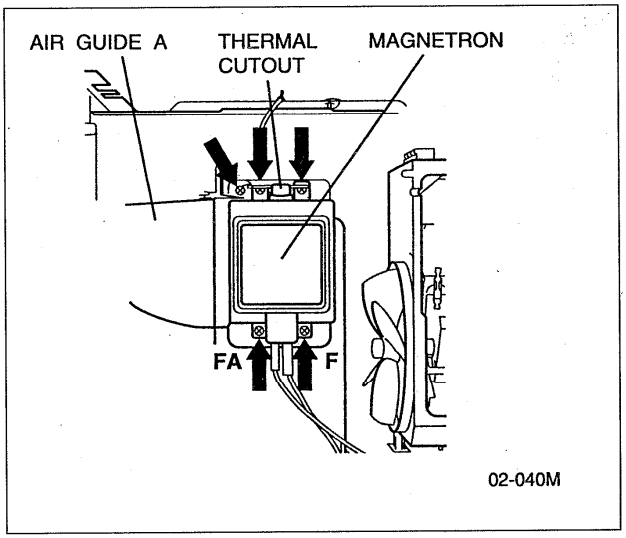
(A) Discharge the high voltage capacitor.
(B) Remove 2 screws holding magnetron thermal cutout.
(C) Remove 1 screw holding air guide A.
(D) Disconnect 2 high voltage lead wires from magnetron filament terminals.
(E) Remove 4 screws holding the magnetron.
NOTE: After replacement of the magnetron, tighten mounting screws properly making sure there is no gap between the waveguide and the magnetron to prevent microwave leakage.

CAUTION

When replacing the magnetron, be sure the antenna gasket is in place.

CAUTION

When connecting 2 filament lead wires to the magnetron terminals, be sure to connect the lead wires in the correct position. The lead wire of high voltage transformer should be connected to "F terminal" and the lead wire from high voltage capacitor should be connected to "FA terminal".



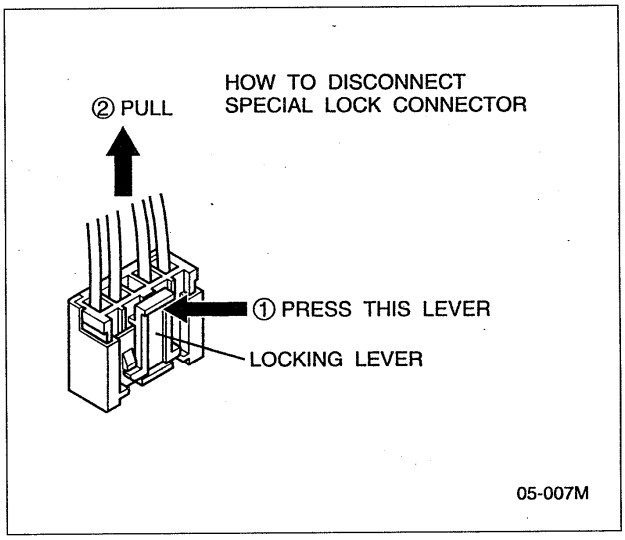
2. Digital Programmer Circuit (DPC) and membrane key board.

NOTE: Be sure to ground any static electric charge built up on your body before handling the DPC.
(A) Disconnect all connectors from D.P.C.
(B) Remove 1 screw holding escutcheon base and slide the escutcheon base upward slightly.
(C) Release flat cable connector's lock of DPC by pushing both levers to inside and pull them upward, and remove flat cable of membrane key board.
(D) Remove 2 screws holding DPC.

To replace membrane key board

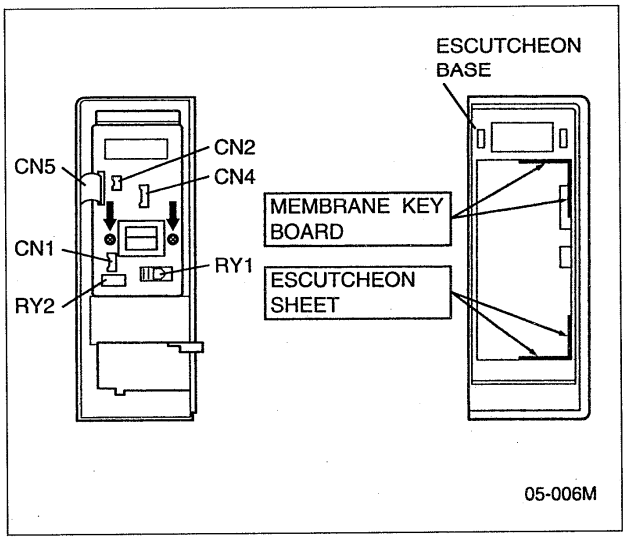
(E) Remove escutcheon bracket from escutcheon base by freeing 4 catch hooks on the escutcheon base.
(F) Peel off the tab of membrane key board from escutcheon base.
(G) Peel off the dislpay filter from escutcheon base.
(H) Push the upper part of key board (display window portion) from back of escutcheon base and peel off escutcheon sheet and membrane key board completely from escutcheon base.

NOTE: 1. The membrane key board is attached to the escutcheon base with double faced adhesive tape. Therefore, applying hot air such as using a hair dryer is recommended for smoother removal.
2. When installing new membrane key board, make sure that the surface of escutcheon base is cleaned sufficiently so that any problems (shorted contacts or uneven surface) can be avoided.
3. Alignment position of membrane key board is as follows (see figure);
Membrane key board: Right and upper edges
Escutcheon sheet: Right and lower edges



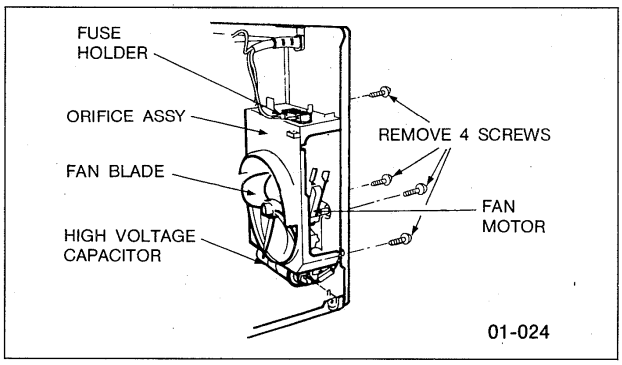
3. Low voltage transformer and/or power relays (RY1, RY2)

NOTE: Be sure to ground any static electric charge built up on your body before handling the DPC.
(A) Using solder wick or a desoldering tool and 30W soldering iron, carefully remove all solder from the terminal pins of the low voltage transformer and/or power relays.
NOTE: Do not use a soldering iron or desoldering tool of more than 30 watts on DPC contacts.
(B) With all the terminal pins cleaned and seperated from DPC contacts, remove the defective transformer/power relays and install new transformer/power relays making sure all terminal pins are inserted completely. Resolder all terminal contacts carefully.



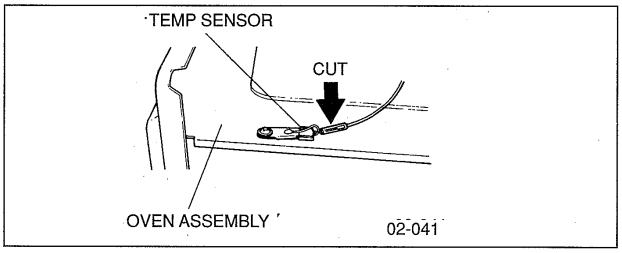
4. Fan motor

(A) Disconnect 2 lead wires from fan motor terminals.
(B) Disconnect 2 lead wires from fuse holder terminals.
(C) Disconnect 4 high voltage lead wires from high voltage capacitor terminals.
(D) Remove 4 screws holding fan motor and orifice assy and detach the orifice assy with fan motor from oven assy.
(E) Remove fan blade from the fan motor shaft by pulling it straight out.
(F) Separate the fan motor from the orifice assy by freeing 2 catch hooks on the orifice assy.



5. Temp sensor (thermal protector)

(A) Cut a lead wire at the top of sensor terminals.
(B) Remove 1 screw holding the temp sensor and replace with new one.
(C) Solder the lead wires securely to the sensor terminals.

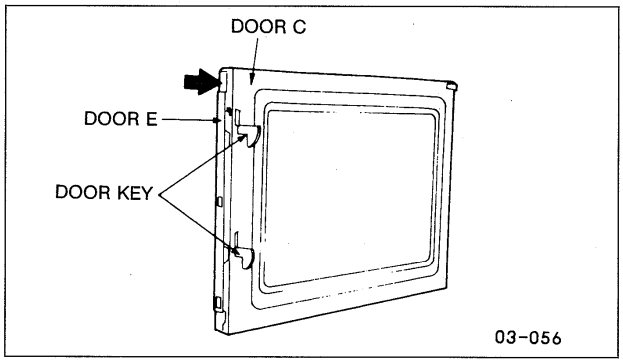


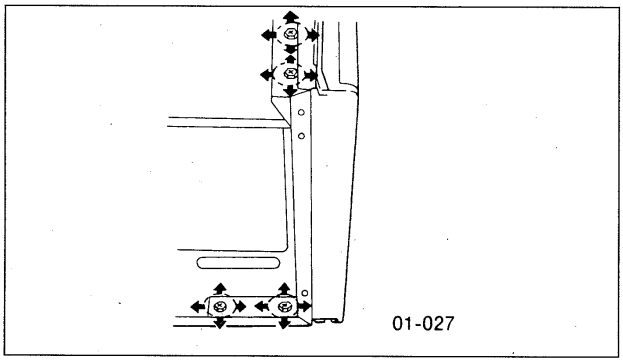
6. Door assembly

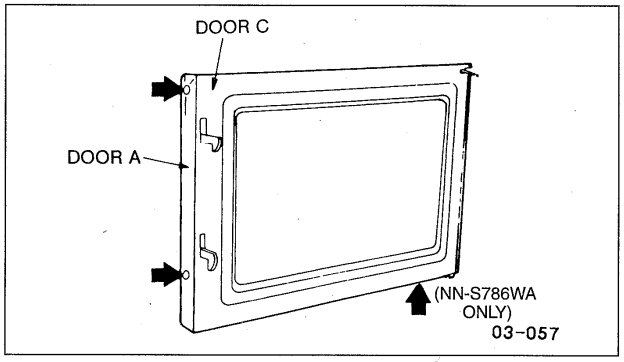
(A) Open the door and remove 2 screws holding side frame of door A (3 screws for NN-S786WA).
(B) Separate door A by freeing catch hooks.
(C) Separate door C by freeing catch hooks using a flat blade screwdriver.
(D) Remove door key and door key spring.

After replacment of the defective component parts of the door, reassemble it and follow the instructions below for proper installation and adjustment so as to prevent an excessive microwave leakage.

(1) When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
(2) Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not mounted properly, microwave power may leak from the clearance between the door and oven.
(3) Perform the microwave leakage test.







7. Turntable motor

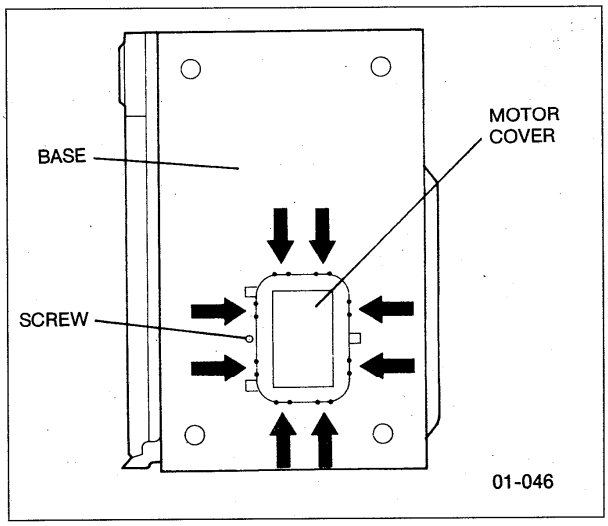
(A) Remove the motor cover by breaking off at the 8 spots indicated by arrows with a cutter or the like. (See Figure)

NOTE: After breaking off the motor cover, make sure that cut-off portions are properly trimmed off or bend to inside so that no sharp edge will expose to outside.

(B) Disconnect 2 lead wires connected to the stirrer motor.

(C) Remove the stirrer motor by removing 2 screws.

NOTE: To reinstall the motor cover, use 4X6 screw.



8. Steam Sensor

(A) Remove 1 screw holding steam sensor unit.

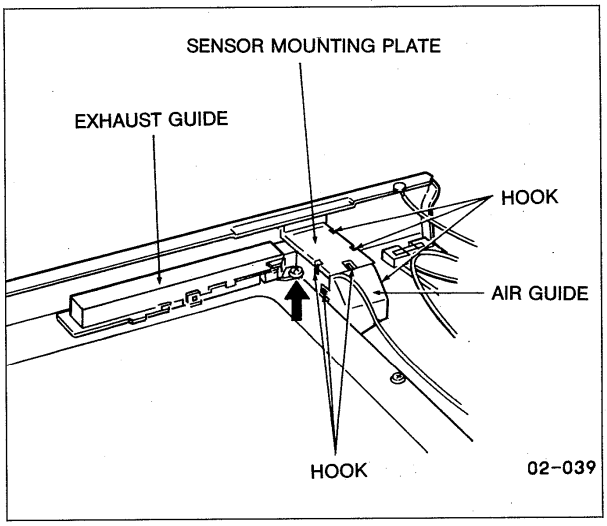
(B) Disconnect CN2 connector from digital programmer circuit board.

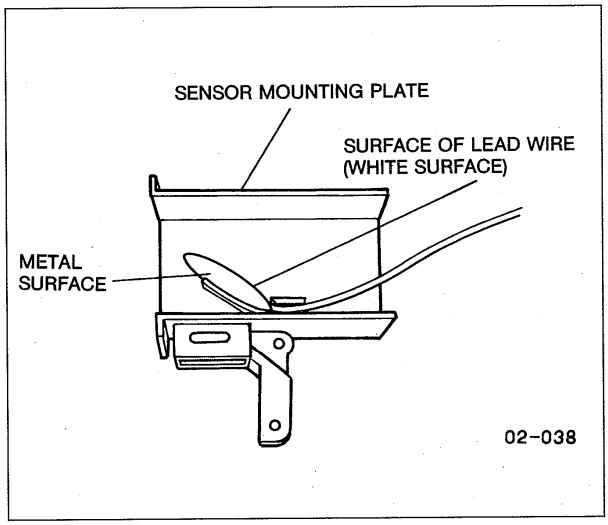
(C) Remove exhaust guide from steam sensor unit.

(D) Remove catch hooks on sensor mounting plate and air guide.

(E) Remove steam sensor from sensor mounting plate.

NOTE: When installing the steam sensor, make sure that the direction of steam sensor is as shown in figure.





COMPONENT TEST PROCEDURE

CAUTION

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cook cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components, or wiring, always unplug the oven from its power source and discharge the high voltage capacitor.

1. Primary Latch Switch, Secondary (Secondary Latch Switch and Power Relay B) Interlocks.

(A) Unplug the lead connectors to Power Relay B and verify continuity of the power relay B 1-2 terminals.
(B) Unplug lead connectors to Primary Latch Switch and Secondary Latch Switch.
(C) Test the continuity of switches at door opened and closed positions with ohm meter (low scale).
Normal continuity readings should be as follows.

	Door Opened	Door Closed
Primary Latch Switch	∞ Ω (open)	0 Ω (close)
Secondary Latch Switch	∞ Ω (open)	0 Ω (close)
Power Relay B	∞ Ω (open)	∞ Ω (open)

2. Short Switch & Monitor

(A) Unplug lead wires from H.V. transformer primary terminals.
(B) Connect test probes of ohm meter to the disconnected leads which were connected to H.V. Transformer.
(C) Test the continuity of short switch with door opened and closed positions using lowest scale of the ohm meter.
Normal continuity readings should be as follows.

Door Opened	Door Closed
∞ Ω	0 Ω

3. High voltage transformer

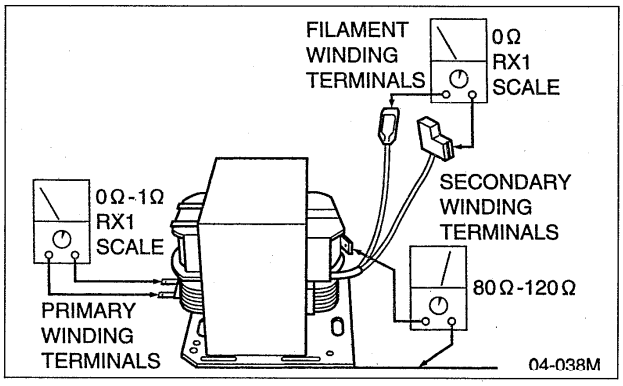
(A) Remove connectors from the transformer terminals and check continuity.
(B) Normal (cold) resistance readings should be as follows:
Secondary winding ..... Approx. 80Ω~120Ω
Filament winding ..... Approx. 0Ω
Primary winding ..... Approx. 0Ω~1Ω

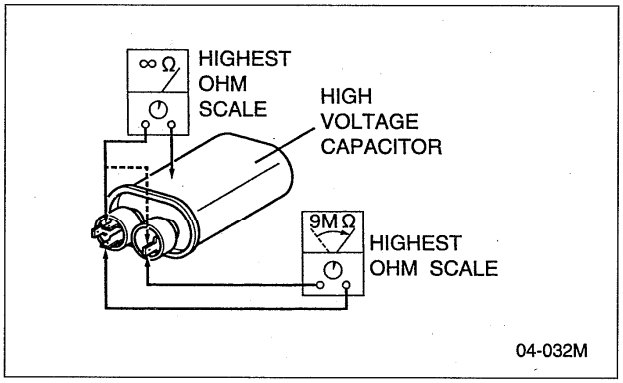
4. High voltage capacitor

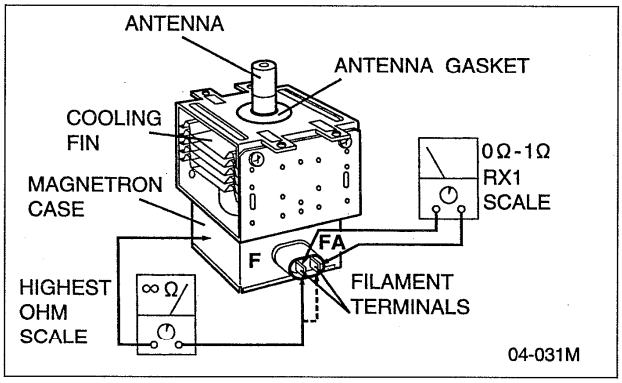
(A) Check continuity of capacitor with meter on highest OHM scale.
(B) A normal capacitor will show continuity for a short time, and then indicate 9MΩ once the capacitor is charged.
(C) A shorted capacitor will show continuous continuity.
(D) An open capacitor will show constant 9MΩ.
(E) Resistance between each terminal and chassis should be infinite.

5. Magnetron

Continuity checks can only indicate an open filament or a shorted magnetron. To diagnosis for an open filament or shorted magnetron.
(A) Isolate magnetron from the circuit by disconnecting the leads.
(B) A continuity check across magnetron filament terminals should indicate one ohm or less.
(C) A continuity check between each filament terminal and magnetron case should read open.

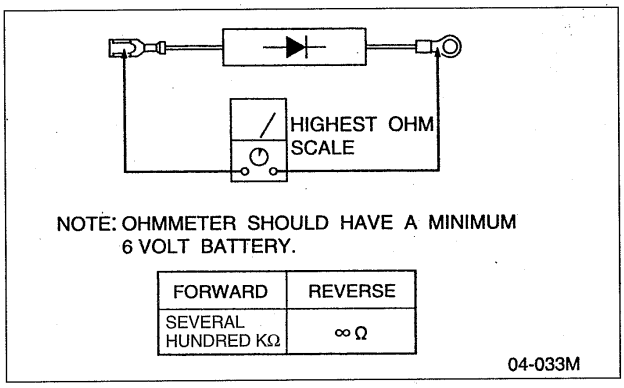






6. Diode

(A) Isolate the diode from the circuit by disconnecting the leads.
(B) With the ohmmeter set on the highest resistance scale, measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-to-back resistance of the diode, otherwise an infinite resistance may be read in both directions.
A normal diode's resistance will be infinite in one direction and several hundred KΩ in the other direction.

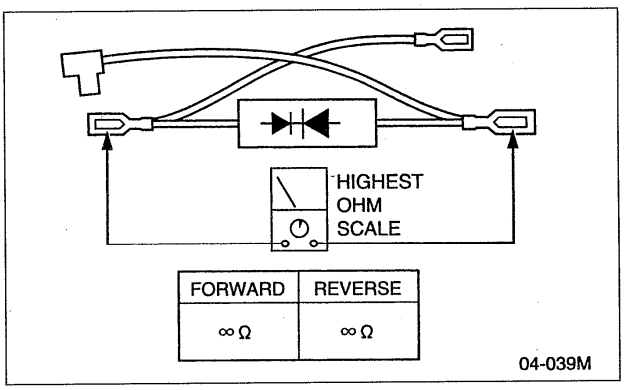


7. Membrane key board (Membrane switch assembly)

Check continuity between switch terminals, by tapping an appropriate pad on the key board. The contacts assignment of the respective pads on the key board is as shown in digital programmer circuit.

8. Protector diode

(A) Isolate the protector diode assembly from the circuit by disconnecting its leads.
(B) With the ohmmeter set on the highest resistance scale, measure the resistance across the protector diode terminals. Reverse the meter leads and again observe the resistance reading.
A normal protector diode's resistance will be infinite in both directions.
It is faulty if it shows continuity in one or both directions.



9. Temp sensor (Thermal protector)

A temp sensor is mounted on top of the oven cavity at the left side. Its purpose is to automatically shut off the oven in case the cavity overheats for any reason.
The thermal protector will operate at 257°F (125°C).
The device is connected to the DPC on touch control models. When the thermal protector exceeds its temperature it will turn off the power to oven cavity and display will go to reset mode.
The cooking program can be reset after cool-down.
THERMISTOR RESISTANCE VALUE
30K-120K at 10°C-30°C (50°F-86°F)

10.Steam Sensor and Digital Programmer Circuit

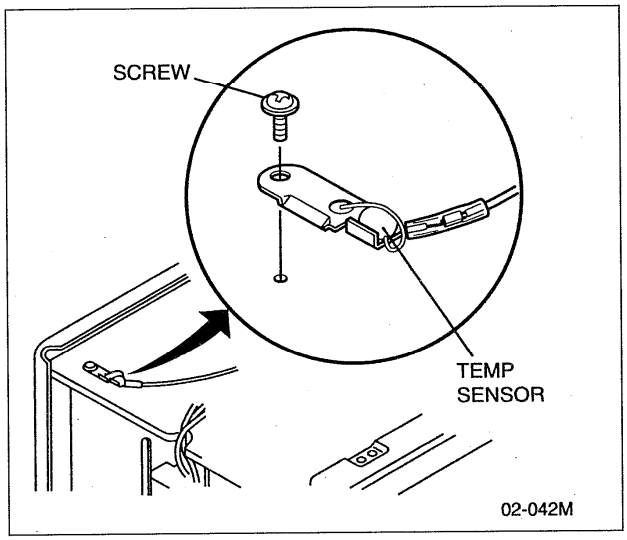
CAUTION

Do not touch any parts of the circuitry on the digital programmer circuit since static electric discharge may damage this control panel.
Always ground yourself while working on this panel to discharge any static charge built up on your body.

In order to determine if the steam sensor function of the digital programmer circuit is in working order or not, do the following test.

1) Place a water load (150 cc) in the oven.
2) Tap Sensor Reheat pad.
3) Tap Start Pad.
4) Steam Sensor detects steam about 1.5 to 4 minutes after the Start Pad is tapped.
5) T1 time cooking automatically switches to remaining time cooking (T2).
6) The remaining cooking time (T2) appears in display window. If the following cooking time appears, Steam Sensor function is normal.

T1 TIME	T2 TIME (Remaining cooking time)
1 Min. 30 Sec.~4 Min.	8 Sec.~23 Sec.



MEASUREMENTS AND ADJUSTMENTS

WARNING

* For continued protection against radiation hazard, replace only with identical replacement parts (For touch models Part No. J6142-1450 Type No. V-16G-3C26-M for Primary latch switch Part No. A61425180AP, Type No. L-3C2-2 for Secondary latch switch and Part No. ANE6178-5R0, Type No. L-2C2-MR for short switch)
* When the 10 Amp. fuse is blown due to the operation of short switch, you must replace Primary latch switch and short switch. Also replace power relay B (Part. No. AEG5J1EG12B/AEG5J1EG18B, Type No. G5J-1-TP) when the continuity check reads shorted contacts (1—2). Then follow the adjustment procedures below.
* Interlock switch replacement — In replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.
* Refer to schematic diagram to ensure proper connection.

1. Adjustment of Primary latch switch, Secondary latch switch and Short switch.

(A) When mounting Primary latch switch, Secondary latch switch and short switch to door hook assembly, mount the Primary latch switch, the Secondary latch switch and the short switch to the door hook assembly as shown in table.

NOTE: **No specific adjustment during installation of Primary latch switch, Secondary latch switch and short switch to the door hook is necessary.**

(B) When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of arrow in table so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the door hook assembly to the oven assembly.

(C) Reconnect the short switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.

2. Measurement of microwave output

The output power of the magnetron can be determined by performing IEC standard test procedures. However, due to the complexity of IEC test procedures, it is recommended to test the magnetron using the simple method outlined below.

Necessary Equipment:

*1 liter beaker *Glass thermometer

*Wrist watch or stopwatch

NOTE: **Check the line voltage under load. Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurate as possible.**

(A) Fill the beaker with exactly one liter of tap water. Stir the water using the thermometer and record the beaker's temperature (recorded as T1).

(B) Place the beaker on the center of glass cook plate. Set the oven for High power and heat it for exactly one minute.

(C) Stir the water again and read the temperature of the beaker (recorded as T2).

(D) The normal temperature rise at High power position for each model is as shown in table.

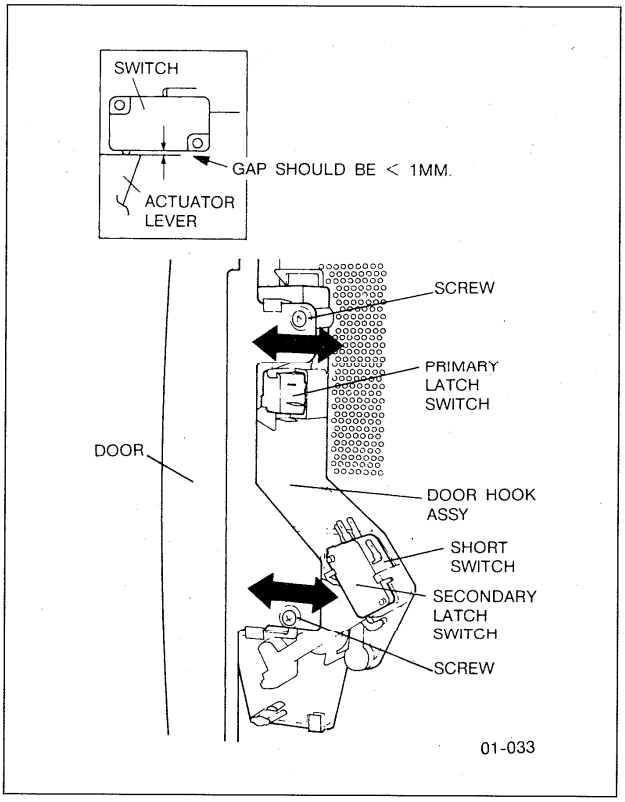


TABLE (1ℓ-1min. test)

RATED OUTPUT	TEMPERATURE RISE
1000W (IEC705-88)	Min. 15.4°F (8.6°C)
930W (IEC705-88)	Min. 14.7°F (8.2°C)

TROUBLESHOOTING GUIDE

CAUTION

1. Check grounding before checking for trouble.
2. Be careful of the high voltage circuit.
3. Discharge high voltage capacitor.
4. When checking the continuity of the switches or the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
   When disconnecting a plastic connector from a terminal, you must hold the plastic connector instead of the lead wire and then disconnect it, otherwise lead wire may be open or the connector cannot by removed.
5. Do not touch any parts of the circuitry on the digital programmer circuit, since static electric discharge may damage this control panel.
   Always touch yourself to ground while working on this panel to discharge any static charge in your body.
6. A 220/230/240V AC is present at the shaded area ▩ of the digital programmer circuit (Terminals of power relay's and primary circuit of low voltage transformer). When troubleshooting, be cautious of possible electrical shock hazard.

First of all operate the microwave oven following the correct operating procedures in order to find the exact cause of any trouble.

[TROUBLE 1] Oven does not start cooking

	SYMPTOM	CAUSE	CORRECTIONS
1.	Oven is dead. Fuse is OK. No display and no operation at all.	1. Open or loose lead wire harness	
		2. Open thermal cutout (Magnetron)	Check fan motor when thermal cutout is defective.
		3. Open low voltage transformer 4. Defective DPC	
2.	Oven does not accept key input (Program)	1. Key input is not in-sequence	Refer to operation procedure.
		2. Open or loose connection of membrane key pad to DPC (Flat cable) 3. Shorted or open membrane key board	
		4. Defective DPC	Refer to DPC troubleshooting.
3.	Oven lamp and fan motor turn on when oven is plugged in with door closed.	1. Misalignment or loose wiring of secondary latch switch	Adjust door and latch switches.
		2. Defective secondary latch switch	
4.	Timer starts count down but no microwave oscillation.	1. Off-alignment of latch switches	Adjust door and latch switches.
		2. Defective primary latch switch 3. Open or loose wiring of power relay (RY1) 4. Defective power relay (RY1). 5. Defective DPC. 6. Open or loose connection of high voltage circuit especially magnetron filament circuit NOTE: Large contact resistance will bring lower magnetron filament voltage and causing magnetron to lower output and/or intermittent oscillation.	
		7. Defective high voltage component H.V. Transformer H.V. Capacitor H.V. Diode Magnetron	Check high voltage component according to component test procedure and replace if it is defective.

【TROUBLE 2】 Fuse is blown

	SYMPTOM	CAUSE	CORRECTIONS
1.	10A fuse is blown.	1. Shorted lead wire harness	
		2. Defective short switch	Check adjustment of latch switches and door
		3. Defective primary latch switch	
		4. Shorted H.V. Capacitor	
		5. Shorted H.V. Diode	Replace H.V. Diode and protector diode (*NOTE)
		6. Defective magnetron	Replace magnetron and protector diode (*NOTE)
		7. Shorted H.V. Transformer	Replace H.V.Transformer and protector diode (*NOTE)
		8. Shorted Protector diode	
	※NOTE: Be sure to replace protector diode together with those H.V.Components. In this case, only D2 of protector diode may be shorted due to faulty H.V.Component.Therefore, if protector diode is not replaced together, high voltage transformer will bedamaged (over heated).		

【TROUBLE 3】 Other troubles

	SYMPTOM	CAUSE	CORRECTIONS
1	Microwave output is low. Oven takes longer time to cook food.	1. Decrease in power source voltage	Consult electrician
		2. Open or loose wiring of magnetron filament circuit. (Intermittent oscillation) 3. Aging change of magnetron	
2.	Fan motor and oven lamp turn on when door is opened.	1. Shorted primary latch switch	
3.	Oven does not operate and return to plugged in mode.	1. Open or loose wiring of temp sensor 2. Defective temp sensor	Check tighten screws on escutcheon base bracket, D.P.C. board and temp sensor.
		3. Defective DPC	Refer to DPC troubleshooting.
4.	Loud buzzing noise can be heard.	1. Loose fan and fan motor 2. Loose screws on H.V. Transformer	
5.	Oven stops operation during cooking	1. Off-alignment of latch switches	Adjust door and latch switches.
		2. Open or loose wiring of primary and secondary latch switch 3. Operation of thermal cutout (Magnetron)	
6.	Turntable motor does not rotate.	1. Open or loose wiring of turntable motor 2. Defective turntable motor	
7.	Oven return to plugged in mode after 10 seconds elapsed in the auto sensor cooking mode.	1. Open or loose wiring of sensor terminals from DPC. 2. Open steam sensor. 3. Defective D.P.C.	Sensor Models

Trouble related to Digital Programmer Circuit

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
No display when oven is first plugged in	1	Fuse pattern of DPC	Normal	STEP 2
			Open (NOTE)	Shorted circuit of ZNR, L. V. T., Oven Lamp etc. Replace DPC
	2	Low voltage transformer (LVT) secondary voltage	Abnormal 0V	LVT
			Normal	→ Step 3
	3	IC-1 pin 1 voltage (Emitter of Q1)	Abnormal	ZD1,Q1
			Normal = 5V	→ Step 4
	4	IC-1 pin 27 voltage (14 pin of IC-2)	Abnormal	IC-2
			Normal	→ IC-1, CX1, DISPLAY

NOTE

Procedure of fuse pattern repairing is as follows:

1. When the fuse pattern (PF2) opens.

(1) Remove jumper wire (PF1).

(2) Insert the removed jumper wire (PF1) to "(PF2)" position and solder it. If both "PF1"and "PF2" fuse pattern are open, please replace DPC.

2. When the fuse pattern (PF4) opens.

(1) Remove jumper wire (PF3).

(2) Insert the removed jumper wire (PF3) to "(PF4)" position and solder it. If both "PF4" and "PF3" fuse pattern are open, please replace DPC.

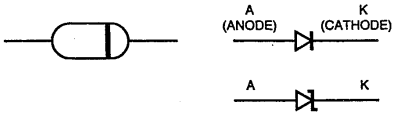
NOTE:* At the time of these repairs, make visual inspection of the varistor for burning damage and examine the transformer with tester for the presence of layer short-circuit (check primary coil resistance).
If any abnormal condition is detected, replace the defective parts.

No key input	1	Membrane switch continuity	Abnormal	Membrane switch
			Normal	IC-1
No beep sound	1	IC-1 pin 23 voltage	Abnormal	IC-1
			Normal	BZ, Q6
Power relay A(RY-2) does not turn on even though the program has been set and the start pad is tapped	1	IC-1 pin 8 voltage while operation	Abnormal	IC-1
			Normal=5V	→ Step 2
	2	short circuit between pin 1 and pin 12 of IC-2	Still not turn on	RY-2
			RY-2 turns on	IC-2
No microwave oscillation at any power setting	1	IC-1 pin 5 and pin 15 voltages while operation at high power	Abnormal	IC-1
			Normal 5---5V, 15---5V IC-1	→ Step 2
	2	Q2 transistor	Abnormal	Q2
			Normal	IC-2, RY-1
Dark or unclear display	1	Replace display and check operation	Normal	DISPLAY
			Abnormal	IC-1
Missing or lighting of unnecessary segment	1	Replace IC-1 and check operation	Normal	IC-1
			Abnormal	DISPLAY

TO BE CONTINUED FOR AUTO SENSOR MODELS				
Auto Sensor cooking does not operate normally. (Steam sensor does not detect steam from foods.)	1	Steam sensor terminal voltage by using high impedance tester (20kΩ/V), when breathe on metal surface of sensor	Abnormal = 0V	Steam sensor
			Normal ≧ 10~30mV	IC-1, IC-3

HOW TO CHECK THE SEMICONDUCTORS USING AN OHM METER

Diode



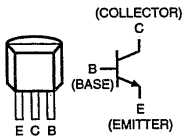
	FORWARD	REVERSE
A-K	SMALL	∞

Transistor

NPN Transistor

2SC·····

2SD·····

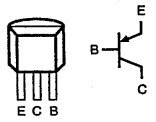


	FORWARD	REVERSE
B-E	SMALL	∞
B-C	SMALL	∞
C-E	∞	∞

PNP Transistor

2SA·····

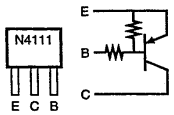
2SB·····



	FORWARD	REVERSE
E-B	SMALL	∞
C-B	SMALL	∞
C-E	∞	∞

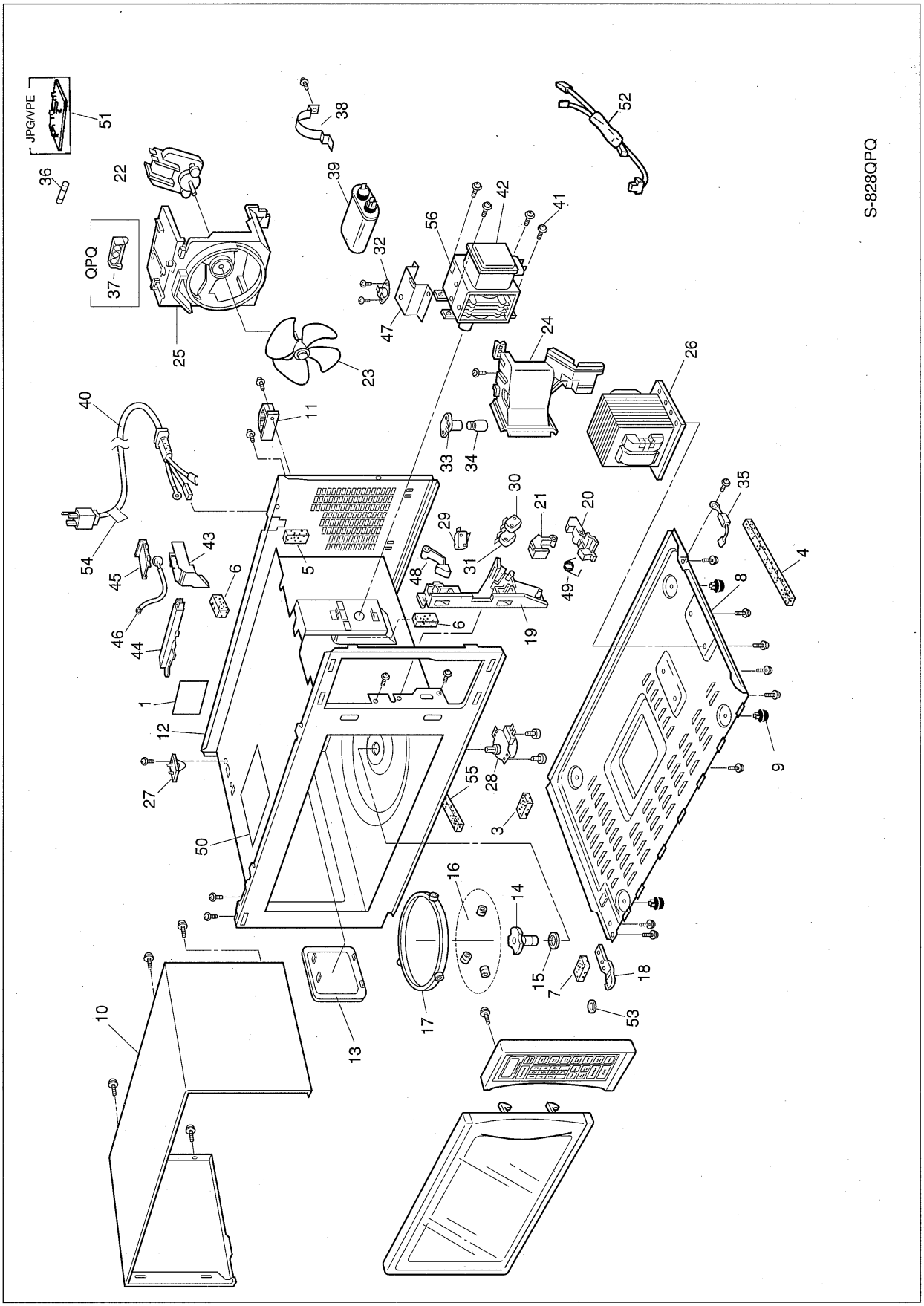
Digital Transistor

PNP Transistor



	FORWARD	REVERSE
E-B	10kΩ~30kΩ	10kΩ~30kΩ
C-B	50kΩ~90kΩ	∞
C-E	40kΩ~80kΩ	∞

EXPLODED VIEW AND PARTS LIST



PARTS LIST

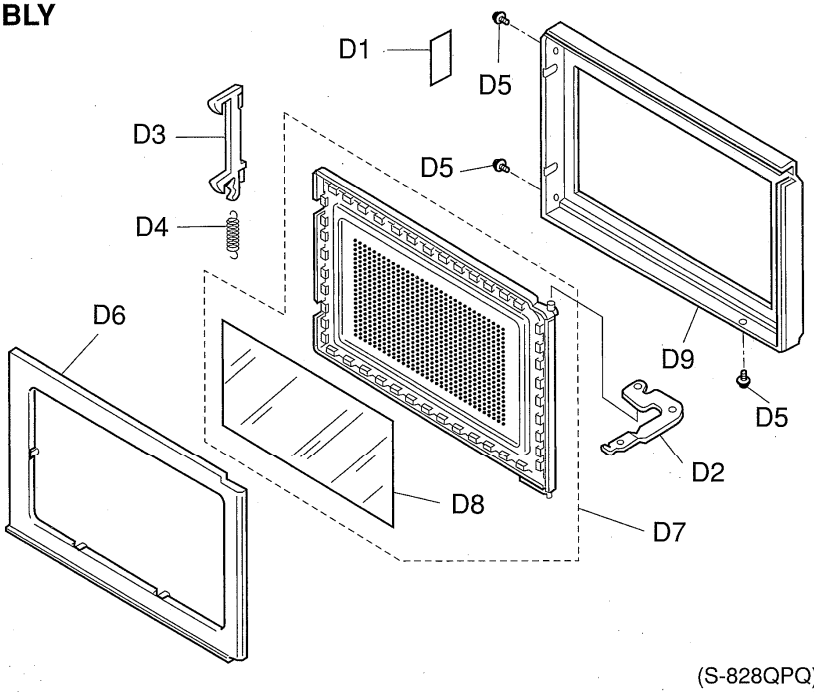
NOTES:
- When ordering replacement part(s), please use part number(s) shown in this parts list. Do not use description of the part.
- Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- Items marked * supplied by MMCA. (U.S.A.)
- Model Number suffixes in Remarks column (i.e. QPQ etc.) indicate parts applicable to only specified country models as follows.
  QPQ: For Australia, JPG: For New Zealand, VPE: For South Africa
  Parts without these suffixes can be used for all countries in that Model No. Series.

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*1		B00065460JP	CAUTION LABEL	1	
*3		AMQ0902000BA	CUSHION RUBBER A	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*4		AMQ0902000AH	CUSHION RUBBER A	1	
*5		AMQ0902000FD	CUSHION RUBBER A	1	NN-S546WA, NN-S566WA, NN-S646BA/WA
*6		AMQ0908000AE	CUSHION RUBBER A	2	NN-S786WA
*7		AMQ0904000BB	CUSHION RUBBER A	1	
*8		B10018250AP	BASE / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*8		B10018640AP	BASE / 1.2	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*8		B10017000AP	BASE / 1.5	1	NN-S786WA
*9		B10088250AP	RUBBER FOOT	4	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*9		B10087050AP	RUBBER FOOT	4	NN-S786WA
*10		B10097250HAP	CABINET BODY / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*10		B10096250QP	CABINET BODY / 1.2	1	NN-S646BA, NN-S676BA
*10		B10096240HQP	CABINET BODY / 1.2	1	NN-S646WA, NN-S676WA, NN-S686WA
*10		B10098280HQP	CABINET BODY / 1.5	1	NN-S786WA
*11		B11404960AQ	STOPPER A	1	
*12	⚠	B200A8340AP	OVEN / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*12	⚠	B201A8660RP	OVEN / 1.2	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*12	⚠	B200A8290AP	OVEN / 1.5	1	NN-S786WA
*13		B20557000AP	CEILING COVER WHITE	1	
*14		B21315540AP	PULLEY SHAFT	1	
*15		B21777050AP	WASHER	1	
*16		B202K4650AP	ROLLER B (U)	1	(NOTE 1)
*17		B290D5950AP	ROLLER RING (U) / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*17		B290D5500AP	ROLLER RING (U) / 1.2 / 1.5	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*18	⚠	B30077050AP	LOWER HINGE (B) / 1.0 / 1.2	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*18	⚠	B30077600AP	LOWER HINGE (B) / 1.5	1	NN-S786WA
*19	⚠	J3020-1480	DOOR HOOK A	1	
*20		B3137-1480	HOOK SPACER B	1	
*21		B3138-1480	HOOK SPACER C	1	
*22		2Z-9AUA.S.	FAN MOTOR	1	(24W, AC, SINGLE)
*23		B40086260AP	FAN BLADE	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S786WA
*23		B40085950AP	FAN BLADE	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*24		B40258250AP	AIR GUIDE A	1	
*25		B41448250AP	ORIFICE / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*25		B41447630AP	ORIFICE / 1.2	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*25		B41447600AP	ORIFICE / 1.5	1	NN-S786WA
*26	⚠	B621C8650QP	H. V. TRANSFORMER	1	NN-S646BA/WA QPQ, NN-S676BA/WA QPQ, NN-S686/S786WA QPQ, NN-S646WA JPG, NN-S676BA JPG, NN-S686/S786WA JPG
*26	⚠	B621C8660VP	H. V. TRANSFORMER	1	NN-S646WA VPE, NN-S676WA VPE, NN-S786WA VPE
*26	⚠	B621C8360QP	H. V. TRANSFORMER	1	NN-S546WA QPQ/JPG, NN-S566WA QPQ/JPG, NN-S576WA QPQ/JPG
*26	⚠	B621C8350VP	H. V. TRANSFORMER	1	NN-S546WA VPE, NN-S576WA VPE

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*27		A601L5180AP	TEMP SENSOR	1	
*28		B63267600JP	TURNTABLE MOTOR	1	(3W)
*29	⚠	J6142-1450	MICRO SWITCH	1	(V-16G-3C26-M) PRIMARY LATCH SWITCH
*30	⚠	A61425180AP	MICRO SWITCH	1	(L-3C2-2) SECONDARY LATCH SWITCH
*31	⚠	ANE6178-5R0	MICRO SWITCH	1	(L-2C2-MR) SHORT SWITCH
*32	⚠	B61456210AP	THERMAL CUTOUT	1	
*33	⚠	B61524740AQ	SOCKET	1	
*34		B60304080BP	INCADESCENT LAMP	1	
*35	⚠	A62024000AP	DIODE, SI	1	
*36	⚠	B63317550GP	FUSE	1	(10A)
*37		B62314000AP	FUSE HOLDER	1	
*38		B61884060AP	CAPACITOR BRACKET	1	
*39	⚠	B60904080GP	H. V. CAPACITOR	1	(1.14uf. AC2000V)
*40	⚠	B910C4760JP	AC CORD W/PLUG	1	ALL QPQ/JPG MODELS ONLY (240V)
*40	⚠	B910C5500VN	AC CORD W/PLUG	1	ALL VPE MODELS ONLY (240V)
*41		XTT4+8B	SCREW	4	(4X8) FOR MAGNETRON
*42	⚠	2M210-M1F	MAGNETRON / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*42	⚠	2M244-M1F	MAGNETRON / 1.2 / 1.5	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*43		B64498660AP	SENSOR COVER A	1	NN-S576WA, NN-S686WA, NN-S786WA
*44		B64508660AP	SENSOR COVER B	1	NN-S576WA, NN-S686WA
*44		A64505500AP	SENSOR COVER B	1	NN-S786WA
*45		B65438660AP	SENSOR COVER C	1	NN-S576WA, NN-S686WA
*45		A65435500AP	SENSOR COVER C	1	NN-S786WA
*46		A607S7050AP	STEAM SENSOR	1	NN-S576WA, NN-S686WA, NN-S786WA
*47		B21675970GP	TC INSULATION BRACKET	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*48		J3136-1480	HOOK SPACER A	1	
*49		J3097-1480	LATCH SPRING	1	
*50		B03478250AP	COVER SHEET	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S786WA
*51		B692Y7680VP	NOISE FILTER	1	ALL JPG/VPE MODELS ONLY
*52		B606V7640QP	PROTECTOR DIODE	1	
*53		B41877630AP	WASHER	1	NN-S786WA
*54		B0239L00XN	AC CORD LABEL	1	ALL VPE MODELS ONLY
*55		AMQ0928000BT	FOG CUSHION RUBBER A	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*56		B03115460QP	N LABEL	1	(ON MAGNETRON)
*		B08878640HAP	CABINET BODY TOUCH-UP PAINT (WHITE)	1	BOTTLE WITH BRUSH
*		B08878640AP	CABINET BODY TOUCH-UP PAINT (BLACK)	1	BOTTLE WITH BRUSH
*		B0887705AAP	CAVITY SPAN PAINT/1.0/1.5	1	SPRAY CAN, FOR REPAIR OF PAINTED OVEN CAVITY
*		B0887700AAP	TOUCH-UP PAINT/1.0/1.5	1	BOTTLE WITH BRUSH, FOR REPAIR OF PAINTED OVEN CAVITY DOOR
*		B08877050AP	CAVITY SPRAY PAINT/1.2	1	SPRAY CAN, FOR REPAIR OF PAINTED OVEN CAVITY
*		B08877000AP	TOUCH-UP PAINT/1.2	1	BOTTLE WITH BRUSH, FOR REPAIR OF PAINTED OVEN CAVITY DOOR

NOTE 1: When ordering the roller B assy, three rollers will be shipped.
When replacing the roller B, three rollers should be replaced at the same time.
Otherwise the glass cooking tray may not turn smoothly.

DOOR ASSEMBLY

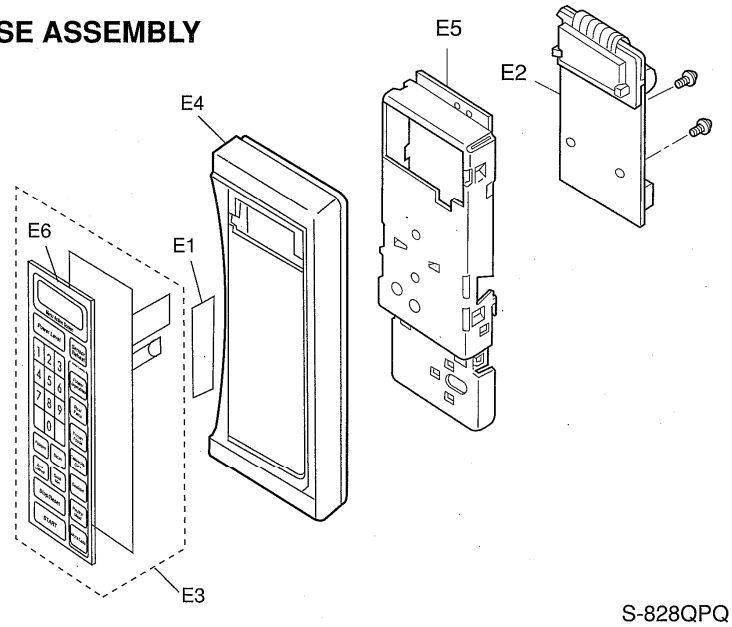


(S-828QPQ)

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*D1		B01726210JP	CAUTION LABEL	1	ALL JPG MODELS ONLY
*D2	⚠	B30067050AP	UPPER HINGE (A)	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*D2	⚠	B30067600AP	UPPER HINGE (A)	1	NN-S786WA
*D3		B3018-1480	DOOR KEY A	1	
*D4		B30214000AP	DOOR KEY SPRING	1	
*D5		XTBANE3+8BZ	SCREW	2	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*D5		XTBANE3+8BZ	SCREW	3	NN-S786WA
*D6	⚠	B30858340HAP	DOOR C / 1.0 WHITE	1	NN-S546WA, NN-S566WA, NN-S576WA
*D6	⚠	B30858640AP	DOOR C / 1.2 BLACK	1	NN-S646BA, NN-S676BA
*D6	⚠	B30858640HAP	DOOR C / 1.2 WHITE	1	NN-S646WA, NN-S676WA, NN-S686WA
*D6	⚠	B30858290HAP	DOOR C / 1.5 WHITE	1	NN-S786WA
*D7	⚠	B302K8340HAP	DOOR E (U) / 1.0 WHITE	1	NN-S546WA, NN-S566WA, NN-S576WA
*D7	⚠	B302K8660AP	DOOR E (U) / 1.2 BLACK	1	NN-S646BA, NN-S676BA
*D7	⚠	B302K8660HAP	DOOR E (U) / 1.2 WHITE	1	NN-S646WA, NN-S676WA, NN-S686WA
*D7	⚠	B302K8290HAP	DOOR E (U) / 1.5 WHITE	1	NN-S786WA
*D8	⚠	B31457200AP	DOOR SCREEN A / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*D8	⚠	B31457050AP	DOOR SCREEN A / 1.2	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*D8	⚠	B31457010AP	DOOR SCREEN A / 1.5	1	NN-S786WA
*D9	⚠	B301A8360HAP	DOOR A (U) / 1.0 WHITE	1	NN-S546WA, NN-S566WA (NOTE 2)
*D9	⚠	B301A8350HAP	DOOR A (U) / 1.0 WHITE	1	NN-S576WA (NOTE 2)
*D9	⚠	B301A8670AP	DOOR A (U) / 1.2 BLACK	1	NN-S646BA (NOTE 2)
*D9	⚠	B301A8670HAP	DOOR A (U) / 1.2 WHITE	1	NN-S646WA (NOTE 2)
*D9	⚠	B301A8660QP	DOOR A (U) / 1.2 BLACK	1	NN-S676BA (NOTE 2)
*D9	⚠	B301A8660HCP	DOOR A (U) / 1.2 WHITE	1	NN-S676WA, NN-S686WA (NOTE 2)
*D9	⚠	B301A8290HQP	DOOR A (U) / 1.5 WHITE	1	NN-S786WA (NOTE 2)

NOTE 2: Please order Door A and Caution Label together.

ESCUTCHEON BASE ASSEMBLY



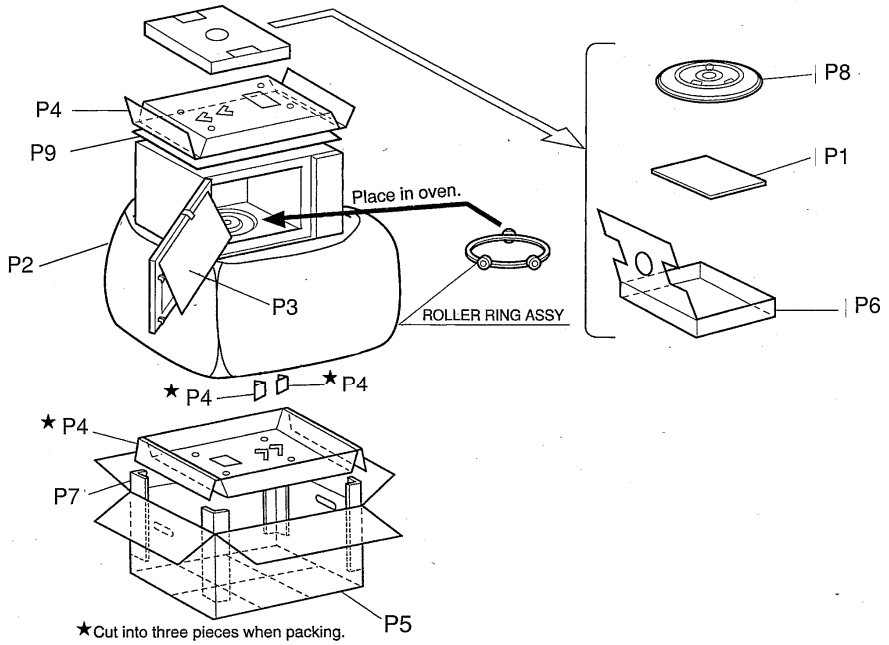
S-828QPQ

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*E1		B00078380HQP	NAME PLATE	1	NN-S546WA QPQ
*E1		B00078380HJP	NAME PLATE	1	NN-S546WA JPG
*E1		B00078380HVP	NAME PLATE	1	NN-S546WA VPE
*E1		B00078360HQP	NAME PLATE	1	NN-S566WA QPQ
*E1		B00078360HJP	NAME PLATE	1	NN-S566WA JPG
*E1		B00078350HQP	NAME PLATE	1	NN-S576WA QPQ
*E1		B00078350HJP	NAME PLATE	1	NN-S576WA JPG
*E1		B00078350HVP	NAME PLATE	1	NN-S576WA VPE
*E1		B00078630QP	NAME PLATE	1	NN-S646BA QPQ
*E1		B00078630HQP	NAME PLATE	1	NN-S646WA QPQ
*E1		B00078630HJP	NAME PLATE	1	NN-S646WA JPG
*E1		B00078630HVP	NAME PLATE	1	NN-S646WA VPE
*E1		B00078660QP	NAME PLATE	1	NN-S676BA QPQ
*E1		B00078660JP	NAME PLATE	1	NN-S676BA JPG
*E1		B00078660HQP	NAME PLATE	1	NN-S676WA QPQ
*E1		B00078660HVP	NAME PLATE	1	NN-S676WA VPE
*E1		B00078650HQP	NAME PLATE	1	NN-S686WA QPQ
*E1		B00078650HJP	NAME PLATE	1	NN-S686WA JPG
*E1		B00078280HQP	NAME PLATE	1	NN-S786WA QPQ
*E1		B00078280HJP	NAME PLATE	1	NN-S786WA JPG
*E1		B00078280HVP	NAME PLATE	1	NN-S786WA VPE
*E2		B603L8380QP	D. P. CIRCUIT (U)	1	NN-S546WA QPQ/VPE RTL (W/COMPONENTS)
*E2		B603L8380JP	D. P. CIRCUIT (U)	1	NN-S546WA JPG RTL (W/COMPONENTS)
*E2		B603L8360QP	D. P. CIRCUIT (U)	1	NN-S566WA QPQ RTL (W/COMPONENTS)
*E2		B603L8360JP	D. P. CIRCUIT (U)	1	NN-S566WA JPG RTL (W/COMPONENTS)
*E2		B603L8350QP	D. P. CIRCUIT (U)	1	NN-S576WA QPQ/VPE RTL (W/COMPONENTS)
*E2		B603L8350JP	D. P. CIRCUIT (U)	1	NN-S576WA JPG RTL (W/COMPONENTS)
*E2		B603L8630QP	D. P. CIRCUIT (U)	1	NN-S646BA QPQ, NN-S646WA QPQ/VPE RTL (W/COMPONENTS)
*E2		B603L8630JP	D. P. CIRCUIT (U)	1	NN-S646WA JPG RTL (W/COMPONENTS)
*E2		B603L8660QP	D. P. CIRCUIT (U)	1	NN-S676BA QPQ, NN-S676WA QPQ/VPE RTL (W/COMPONENTS)
*E2		B603L8660JP	D. P. CIRCUIT (U)	1	NN-S676BA JPG RTL (W/COMPONENTS)
*E2		B603L8650QP	D. P. CIRCUIT (U)	1	NN-S686WA QPQ RTL (W/COMPONENTS)
*E2		B603L8650JP	D. P. CIRCUIT (U)	1	NN-S686WA JPG RTL (W/COMPONENTS)
*E2		B603L8280QP	D. P. CIRCUIT (U)	1	NN-S786WA QPQ/VPE RTL (W/COMPONENTS)
*E2		B603L8280JP	D. P. CIRCUIT (U)	1	NN-S786WA JPG RTL (W/COMPONENTS)
*E3		B630Y8380HQP	MEMBRANE SWITCH (U)	1	NN-S546WA (W/ESCUTCHEON SHEET)

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*E3		B630Y8360HQP	MEMBRANE SWITCH (U)	1	NN-S566WA (W/ESCUTCHEON SHEET)
*E3		B630Y8350HQP	MEMBRANE SWITCH (U)	1	NN-S576WA (W/ESCUTCHEON SHEET)
*E3		B630Y8630QP	MEMBRANE SWITCH (U)	1	NN-S646BA (W/ESCUTCHEON SHEET)
*E3		B630Y8630HQP	MEMBRANE SWITCH (U)	1	NN-S646WA (W/ESCUTCHEON SHEET)
*E3		B630Y8660QP	MEMBRANE SWITCH (U)	1	NN-S676BA (W/ESCUTCHEON SHEET)
*E3		B630Y8660HQP	MEMBRANE SWITCH (U)	1	NN-S676WA (W/ESCUTCHEON SHEET)
*E3		B630Y8650HQP	MEMBRANE SWITCH (U)	1	NN-S686WA (W/ESCUTCHEON SHEET)
*E3		B630Y8280HQP	MEMBRANE SWITCH (U)	1	NN-S786WA (W/ESCUTCHEON SHEET)
*E4		B80348660AP	ESCUTCHEON BASE	1	NN-S646BA, NN-S676BA (NOTE 3)
*E4		B80348660HAP	ESCUTCHEON BASE	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646WA, NN-S676WA, NN-S686WA (NOTE 3)
*E4		B80348290HAP	ESCUTCHEON BASE	1	NN-S786WA (NOTE 3)
*E5		B81278640AP	BACK PLATE	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*E5		B81278290AP	BACK PLATE	1	NN-S786WA
*E6		B83378380HQP	ESCUTCHEON SHEET	1	NN-S546WA
*E6		B83378360HQP	ESCUTCHEON SHEET	1	NN-S566WA
*E6		B83378350HQP	ESCUTCHEON SHEET	1	NN-S576WA
*E6		B83378630QP	ESCUTCHEON SHEET	1	NN-S646BA
*E6		B83378630HQP	ESCUTCHEON SHEET	1	NN-S646WA
*E6		B83378660QP	ESCUTCHEON SHEET	1	NN-S676BA
*E6		B83378660HQP	ESCUTCHEON SHEET	1	NN-S676WA
*E6		B83378650HQP	ESCUTCHEON SHEET	1	NN-S686WA
*E6		B83378280HQP	ESCUTCHEON SHEET	1	NN-S786WA

NOTE 3: Please order Escutcheon Base and Name Plate together.

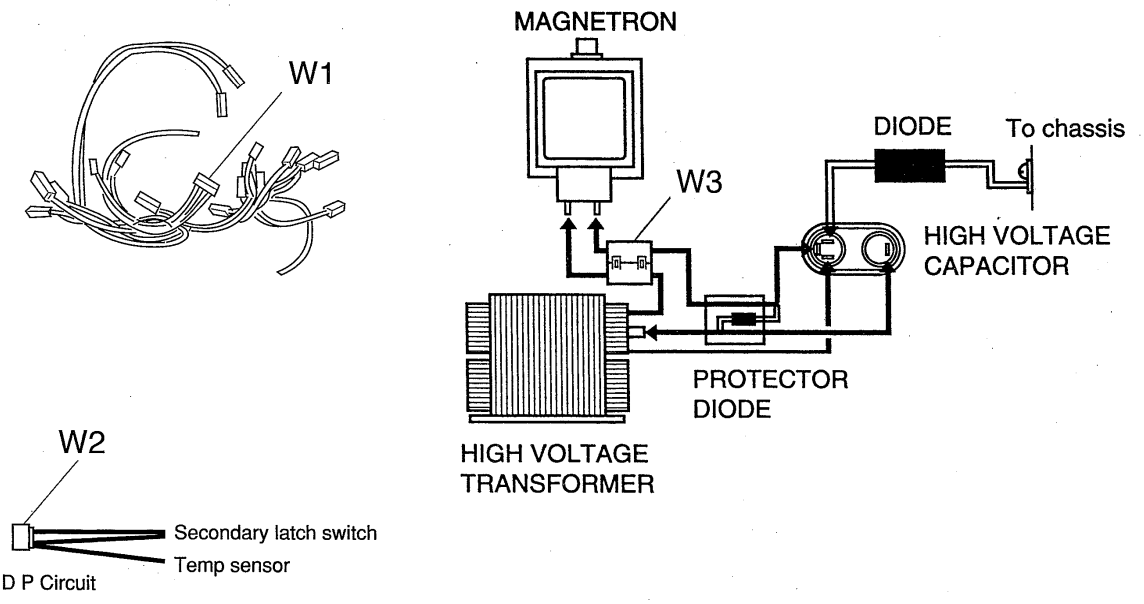
PACKING AND ACCESSORIES



S-828QPQ

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*P1		B00037860QP	INSTRUCTION MANUAL / ENGLISH	1	
*P2		B01068340AP	P. E. BAG	1	NN-S546WA, NN-S566WA, NN-S576WA
*P2		B01068290AP	P. E. BAG	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*P3		B01075640AP	DOOR SHEET	1	NN-S546WA, NN-S566WA, NN-S576WA, NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*P3		B01077000AP	DOOR SHEET	1	NN-S786WA
*P4		B01837220AP	CORRUGATED FILLER / 1.0	2	NN-S546WA, NN-S566WA, NN-S576WA
*P4		B01837050AP	CORRUGATED FILLER / 1.2	2	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*P4		B01837000AP	CORRUGATED FILLER / 1.5	2	NN-S786WA
*P5		B010A7730AP	PACKING CASE / PAPER / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*P5		B02177630AP	PACKING CASE / PAPER / 1.2	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*P5		B010A8310AP	PACKING CASE / PAPER / 1.5	1	NN-S786WA
*P6		B02218260AP	UPPER SUPPORT PACKING / 1.0	1	NN-S546WA, NN-S566WA, NN-S576WA
*P6		B02218310AP	UPPER SUPPORT PACKING /1.2 /1.5	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*P7		B01487720RP	CORNER POST	4	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA
*P8		A06015690QP	COOKING TRAY	1	NN-S546WA, NN-S566WA, NN-S576WA
*P8		A06014000AP	COOKING TRAY	1	NN-S646BA/WA, NN-S676BA/WA, NN-S686WA, NN-S786WA
*P9		B01927050AP	TOP SHEET	1	NN-S646BA QPQ, NN-S676BA QPQ/JPG

WIRING MATERIALS

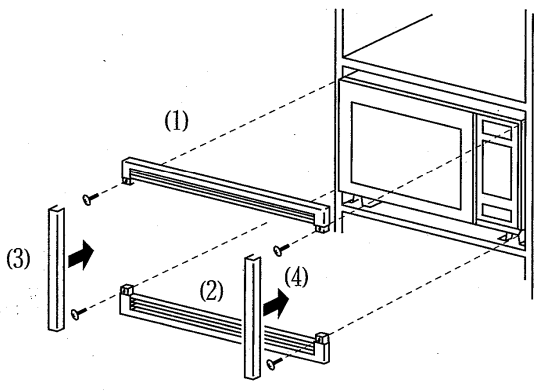


S-828QPQ

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*W1		B030A7640QP	LEAD WIRE HARNESS	1	ALL QPQ MODELS ONLY
*W1		B030A8280JP	LEAD WIRE HARNESS	1	ALL JPG/VPE MODELS ONLY
*W2		B03537050AP	LEAD WIRE	1	
*W3		A50966520UP	FERRITE COIL	1	ALL JPG MODELS ONLY

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
			REF. NO. 51 NOISE FILTER (U)		
L1		A621A7600CP	FILTER COIL	1	
F1		A62316010BP	FUSE HOLDER	2	
C2, 3	⚠	ECKDNS472MEX	CERAMIC CAPACITOR	2	0.0047MF, 250V, ±20%
C1		ECQU2A104MN	POLYESTER CAPACITOR	1	0.1MF, 250V, ±20%
R1		ERD25FJ564S	CARBON FILM RESISTOR	1	560K OHM, 1/4W, ±5%
ZNR2,3		ERZC10DK112W	VARISTOR	2	

PARTS LIST FOR MICROWAVE OVEN TRIM KITS



Trim kit Model No.	Top and Bottom Strip Ref no:1.2	Pcs/ Set	Side Strip Ref No:3.4	Pcs/ Set	Microwave Oven Model No.
NN-TK792	A16031J0HCP	2	A1601A020HCP	2	NN-S786WA
NN-TK652	A1603A141HGP	2	A1601A310HGP	2	NN-S646WA NN-S676WA NN-S686WA
NN-TK682	A1603A310KGN	2	A1601A310KGN	2	NN-S646BA NN-S676BA

NOTE: The top and bottom strips have the same part number and the left and right side strips also have the same part number. These parts will be supplied on one piece per one part number.

DIGITAL PROGRAMMER CIRCUIT

PARTS LIST Note: Items marked * are supplied by MMCA (U.S.A.)

REF No.	PART NO.	DESCRIPTION	QTY	REMARKS	REF No.	PART NO.	DESCRIPTION	QTY	REMARKS
BZ1	AEFB22EP20TL	BUZZER	1	2.0KHZ	SP1	B82847010AP	DISPLAY HOLDER	1	FOR DISPLAY
C10	ECA1HM102E	ELECTROLYTIC CAPACITOR, AL.	1	470μF/35V/20%	T1	ETP41KCN81QP	L.V. TRANSFORMER	1	(220V)
C11	ECEA1HU101B	ELECTROLYTIC CAPACITOR, AL.	1	100μF/50V/20%	Z1	AEXBM5X104JT	COMPOUND-RESISTOR	1	100KΩX5
C13	ECEA1CKA100B	ELECTROLYTIC CAPACITOR, AL.	1	10μF/16V/20%	ZD1,2	AEDZ5R6ES2T1	ZENER DIODE,SI	2	
C14,15,21, 22,24,25,26,31	AECBT50F103Z	CERAMIC CAPACITOR	8	0.01μF/25V/ 20%+80%	D20	ERZC10DK621F	VARISTOR	1	
C17,28,32	AECF50F104Z	CERAMIC CAPACITOR	3	0.01μF/50V/ -20%+80%	JPR1	ERD25VJ1ROT	CARBON FILM RESISTOR	1	NN-S646WA/BAQPQ
C23	ECEA1HKA2R2B	ELECTROLYTIC CAPACITOR, AL.	1	2.2μF/50V/20%					NN-S646WAVPE
CN1	AEEMMF01505W	CONNECTOR	1	5PIN					NN-S676WAVPE
CN2	AEEMMF00703W	CONNECTOR	1	3PIN					1Ω,1/4W,±5%
CN4	AEEMMF00D04W	CONNECTOR	1	4PIN	JPR1	ERD25VJ103T	CARBON FILM RESISTOR	1	NN-S546WA,
CN5	AEEM09FDZBTM	CONNECTOR	1						NN-S576WA
									10KΩ,1/4W,±5%
CX1	EF0GC4194T4	CERAMIC RESONATOR	1	4.19MHz	JPR2	ERD25VJ1ROT	CARBON FILM RESISTOR	1	NN-S676WA/BAJPG
D10,11	AEDNERA1502	DIODE, SI	2	(1A)					NN-S786WAVPE
D12,14,17,19	MA196-(TA5)	DIODE, SI	4	0.1A					NN-S546WAJPG
D13	MA700-(TA)	DIODE, SI	1	(0.03A)					NN-S566WAJPG
									NN-S576WAJPG
DISP1*	AEFR6CM9R or								NN-S686WAJPG
	AEFR06SS17	FLUORESCENT TUBE	1						1Ω, 1/4W, ±5%
IC1*	AEIC38121165	L.S.I.	1	NN-S546WA,	JPR1	ERD25VJ622T	CARBON FILM RESISTOR	1	NN-S786WAQPQ
				NN-S566WA,					6.2KΩ,1/4W,±5%
				NN-S576WA	JPR1	ERD25VJ332T	CARBON FILM RESISTOR	1	NN-S676BAJPG
IC1*	AEIC38127105	L.S.I.	1	NN-S646BA/WA,					NN-S686WAQPQ/JPG
				NN-S676BA/WA					3.3KΩ,1/4W,±5%
				NN-S686WA,					
				NN-S786WA	JPR1	ERD25VJ303T	CARBON FILM RESISTOR	1	NN-S786WAJPG/VPE
IC2*	AEIC102977AN	IC	1						30KΩ, 1/4W,±5%
IC3*	AEHMH705	IC	1	NN-S576WA,	JPR1	ERD25VJ163T	CARBON FILM RESISTOR	1	NN-S646WAJPG
				NN-S676BA/WA					16KΩ, 1/4W,±5%
				NN-S686WA	JPR1	ERD25VJ683T	CARBON FILM RESISTOR	1	NN-S566WA
				NN-S786WA					68KΩ, 1/4W,±5%
Q1	2SD2006QRTA	TRANSISTOR, SI, 1.2W	1	(120MHZ)					
Q2	2SD1991AQSTA	TRANSISTOR, SI, 400MW	1	(150MHZ)					
Q6	UN4211-(TA)	TRANSISTOR, SI, 300MW	1						
R10,11	ERDS2TJ151T	CARBON FILM RESISTOR	2	150Ω1/4W±5%					
R12,24,25, 26,28,29,37	ERDS2TJ103T	CARBON FILM RESISTOR	7	10KΩ, 1/4W±5%					
R13	ERDS2TJ472T	CARBON FILM RESISTOR	1	NN-S546WA,					
				NN-S566WA,					
				NN-S646BA/WA					
				4.7KΩ,1/4W,±5%					
R13,14,15	ERDS2TJ472T	CARBON FILM RESISTOR	3	NN-S576WA,					
				NN-S676BA/WA,					
				NN-S686WA,					
				NN-S786WA					
				4.7KΩ,1/4W,±5%					
R16,22	ERDS2TJ102T	CARBON FILM RESISTOR	2	1KΩ, 1/4W, ±5%					
R17,31	ERDS2TJ332T	CARBON FILM RESISTOR	2	3.3KΩ, 1/4W, ±5%					
R20	ERDS2TJ333T	CARBON FILM RESISTOR	1	33KΩ, 1/4W, ±5%					
R51,53	ERDS2TJ101T	CARBON FILM RESISTOR	2	100KΩ, 1/4W, ±5%					
R30,38,39, 41,42,43, 44,45,46,47, 48	ERDS2TJ104T	CARBON FILM RESISTOR	11	100KΩ, 1/4W, ±5%					
R50	ERDS2TJ2R2T	CARBON FILM RESISTOR	1	2.7Ω, 1/4W, ±5%					
RY1	AEG5J1EM18B	POWER RELAY	1	(18V)					
RY2	AEBG5B18P-1	POWER RELAY	1	(18V)					

SERVICE FIXTURES AND TOOLS

EXTENSION CABLES

NOTE: To be used when repairing the DPC board assembly directly on the oven for easy access of the board.

DPC COMMON CHECKER AND ITS CABLE

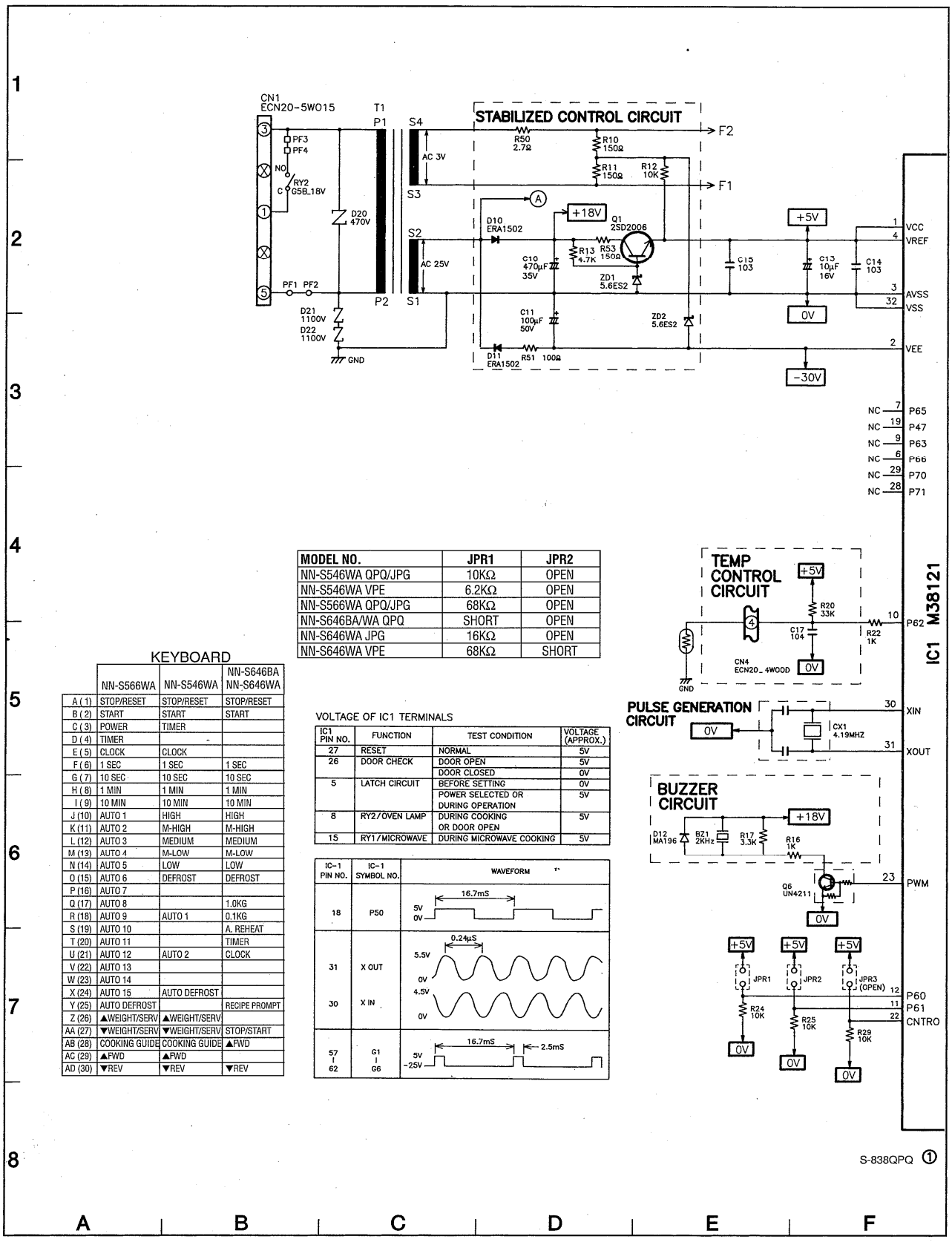
NOTE: To be used only when DPC common checker is available.

REF No.	PART NO.	DESCRIPTION	QTY	REMARKS	REF No.	PART NO.	DESCRIPTION	QTY	REMARKS
	AT40P003	3 pin Extension Cable	1	Cable No. 48		ANE60OZK70AP	DPC. Common Checker	1	
	AT40P004	4 pin Extension Cable	1	Cable No. 47		AT30A7020AP	DPC. Checker Cable	1	NOTE
	AT40P005	5 pin Extension Cable	1	Cable No. 46					
	AT40E006	1 pinX6 Extension Cable	1	Cable No. 9					

(S-828QPQ)

DIGITAL PROGRAMMER CIRCUIT (NN-S546WA, NN-S566WA, NN-S646BA/WA)

SCHEMATIC DIAGRAM



MODEL NO.	JPR1	JPR2
NN-S546WA QPQ/JPG	10KΩ	OPEN
NN-S546WA VPE	6.2KΩ	OPEN
NN-S566WA QPQ/JPG	68KΩ	OPEN
NN-S646BA/WA QPQ	SHORT	OPEN
NN-S646WA JPG	16KΩ	OPEN
NN-S646WA VPE	68KΩ	SHORT

KEYBOARD

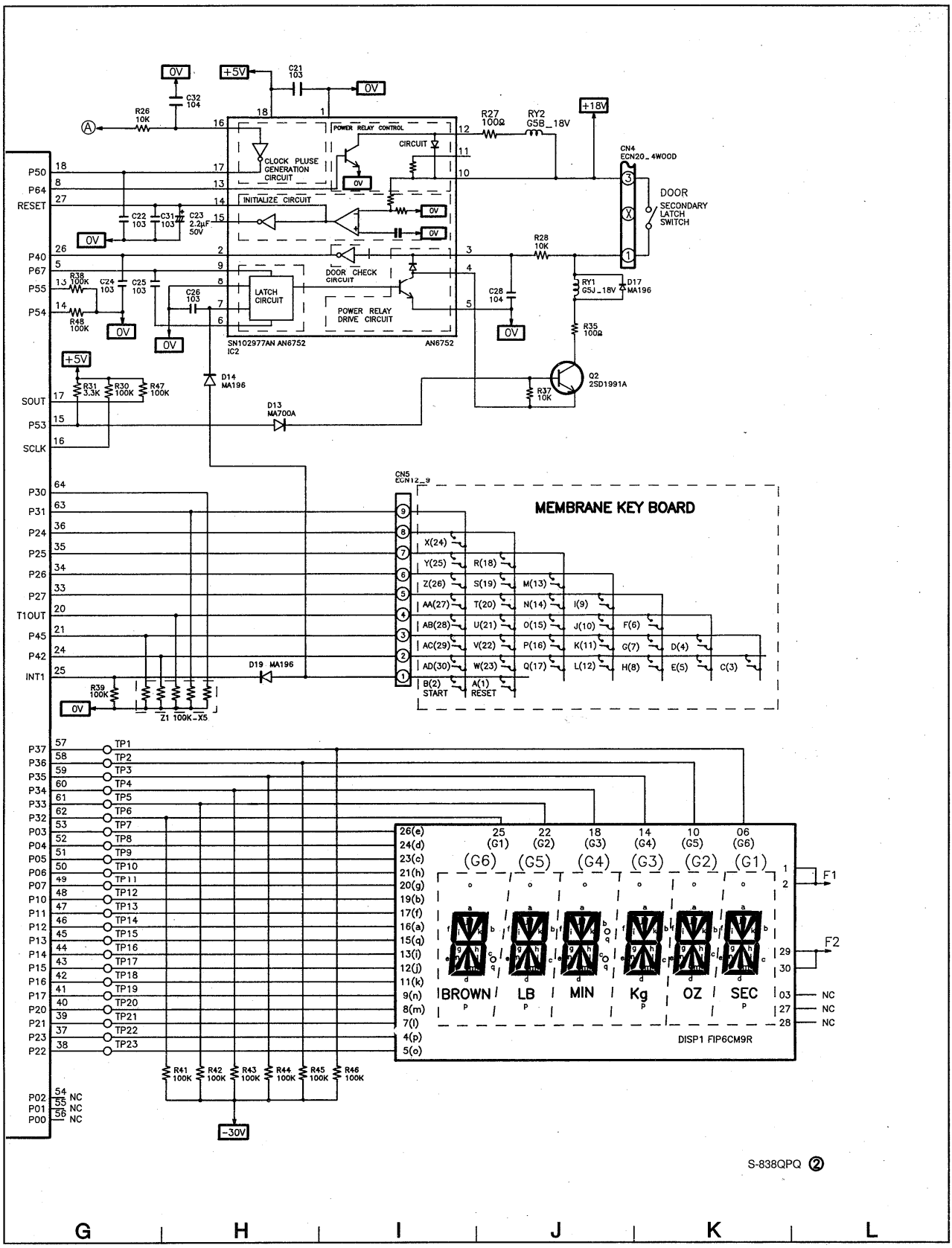
	NN-S566WA	NN-S546WA	NN-S646BA NN-S646WA
A (1)	STOP/RESET	STOP/RESET	STOP/RESET
B (2)	START	START	START
C (3)	POWER	TIMER	
D (4)	TIMER		
E (5)	CLOCK	CLOCK	
F (6)	1 SEC	1 SEC	1 SEC
G (7)	10 SEC	10 SEC	10 SEC
H (8)	1 MIN	1 MIN	1 MIN
I (9)	10 MIN	10 MIN	10 MIN
J (10)	AUTO 1	HIGH	HIGH
K (11)	AUTO 2	M-HIGH	M-HIGH
L (12)	AUTO 3	MEDIUM	MEDIUM
M (13)	AUTO 4	M-LOW	M-LOW
N (14)	AUTO 5	LOW	LOW
O (15)	AUTO 6	DEFROST	DEFROST
P (16)	AUTO 7		
Q (17)	AUTO 8		1.0KG
R (18)	AUTO 9	AUTO 1	0.1KG
S (19)	AUTO 10		A. REHEAT
T (20)	AUTO 11		TIMER
U (21)	AUTO 12	AUTO 2	CLOCK
V (22)	AUTO 13		
W (23)	AUTO 14		
X (24)	AUTO 15	AUTO DEFROST	
Y (25)	AUTO DEFROST		RECIPE PROMPT
Z (26)	▲WEIGHT/SERV	▲WEIGHT/SERV	
AA (27)	▼WEIGHT/SERV	▼WEIGHT/SERV	STOP/START
AB (28)	COOKING GUIDE	COOKING GUIDE	▲FWD
AC (29)	▲FWD	▲FWD	
AD (30)	▼REV	▼REV	▼REV

VOLTAGE OF IC1 TERMINALS

IC1 PIN NO.	FUNCTION	TEST CONDITION	VOLTAGE (APPROX.)
27	RESET	NORMAL	5V
26	DOOR CHECK	DOOR OPEN	5V
		DOOR CLOSED	0V
5	LATCH CIRCUIT	BEFORE SETTING	0V
		POWER SELECTED OR DURING OPERATION	5V
8	RY2/OVEN LAMP	DURING COOKING OR DOOR OPEN	5V
15	RY1/MICROWAVE	DURING MICROWAVE COOKING	5V

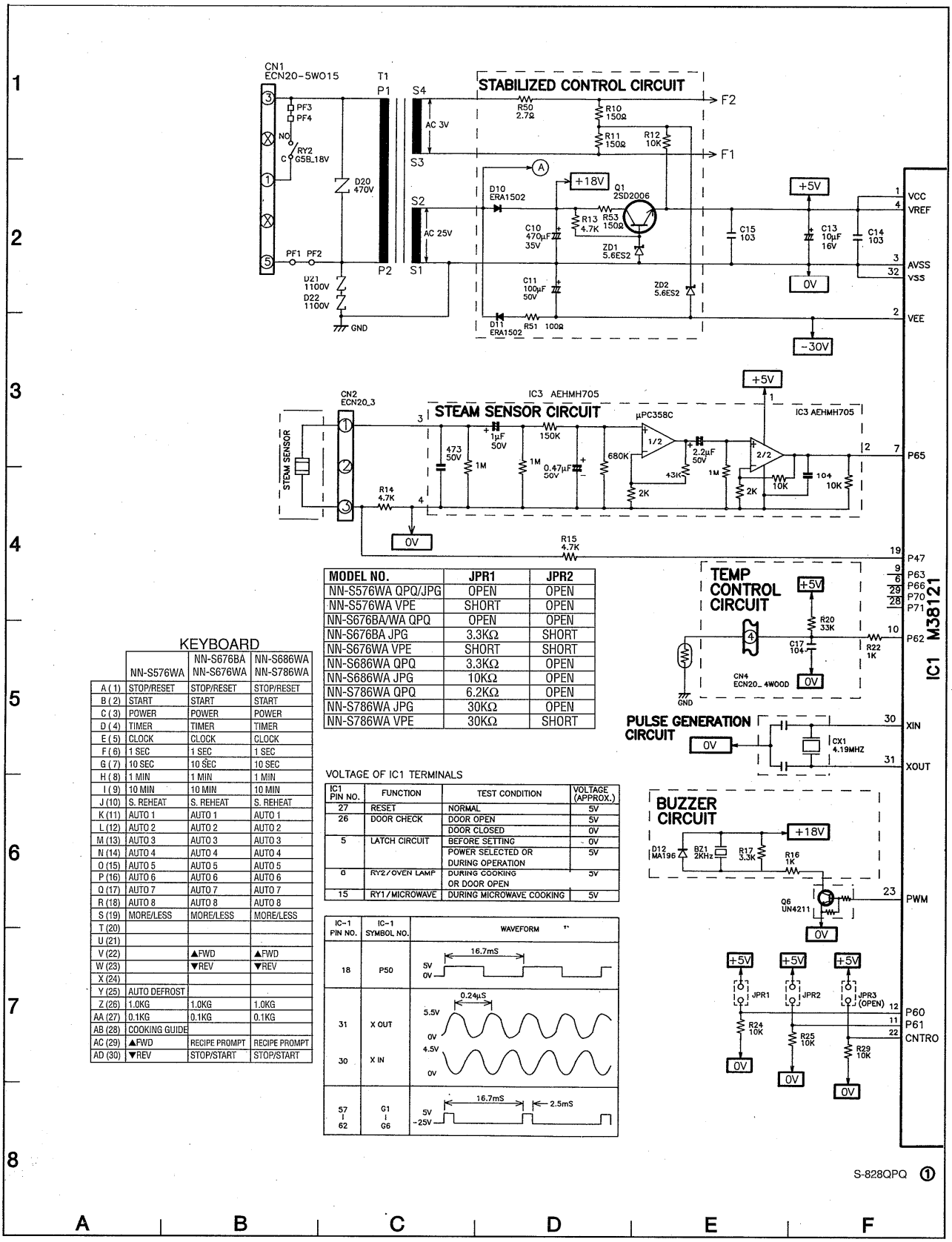
IC-1 PIN NO.	IC-1 SYMBOL NO.	WAVEFORM
18	P50	16.7mS, 5V, 0V
31	X OUT	0.24μS, 5.5V, 0V
30	X IN	4.5V, 0V
57 I 62	G1 I G6	16.7mS, 2.5mS, 5V, -25V

S-838QPQ ①


MEMBRANE KEY BOARD
DISP1 FIP6CM9R
BROWN
LB
MIN
Kg
OZ
SEC
DOOR
SECONDARY
LATCH
SWITCH
POWER RELAY CONTROL
CLOCK PLUSE GENERATION CIRCUIT
INITIALIZE CIRCUIT
DOOR CHECK CIRCUIT
LATCH CIRCUIT
POWER RELAY DRIVE CIRCUIT
SN102977AN AN6752
IC2
AN6752
S-838QPQ ②

DIGITAL PROGRAMMER CIRCUIT (NN-S576WA, NN-S676BA/WA, NN-S686WA, NN-S786WA)

SCHEMATIC DIAGRAM



MODEL NO.	JPR1	JPR2
NN-S576WA QPQ/JPG	OPEN	OPEN
NN-S576WA VPE	SHORT	OPEN
NN-S676BA/WA QPQ	OPEN	OPEN
NN-S676BA JPG	3.3KΩ	SHORT
NN-S676WA VPE	SHORT	SHORT
NN-S686WA QPQ	3.3KΩ	OPEN
NN-S686WA JPG	10KΩ	OPEN
NN-S786WA QPQ	6.2KΩ	OPEN
NN-S786WA JPG	30KΩ	OPEN
NN-S786WA VPE	30KΩ	SHORT

KEYBOARD

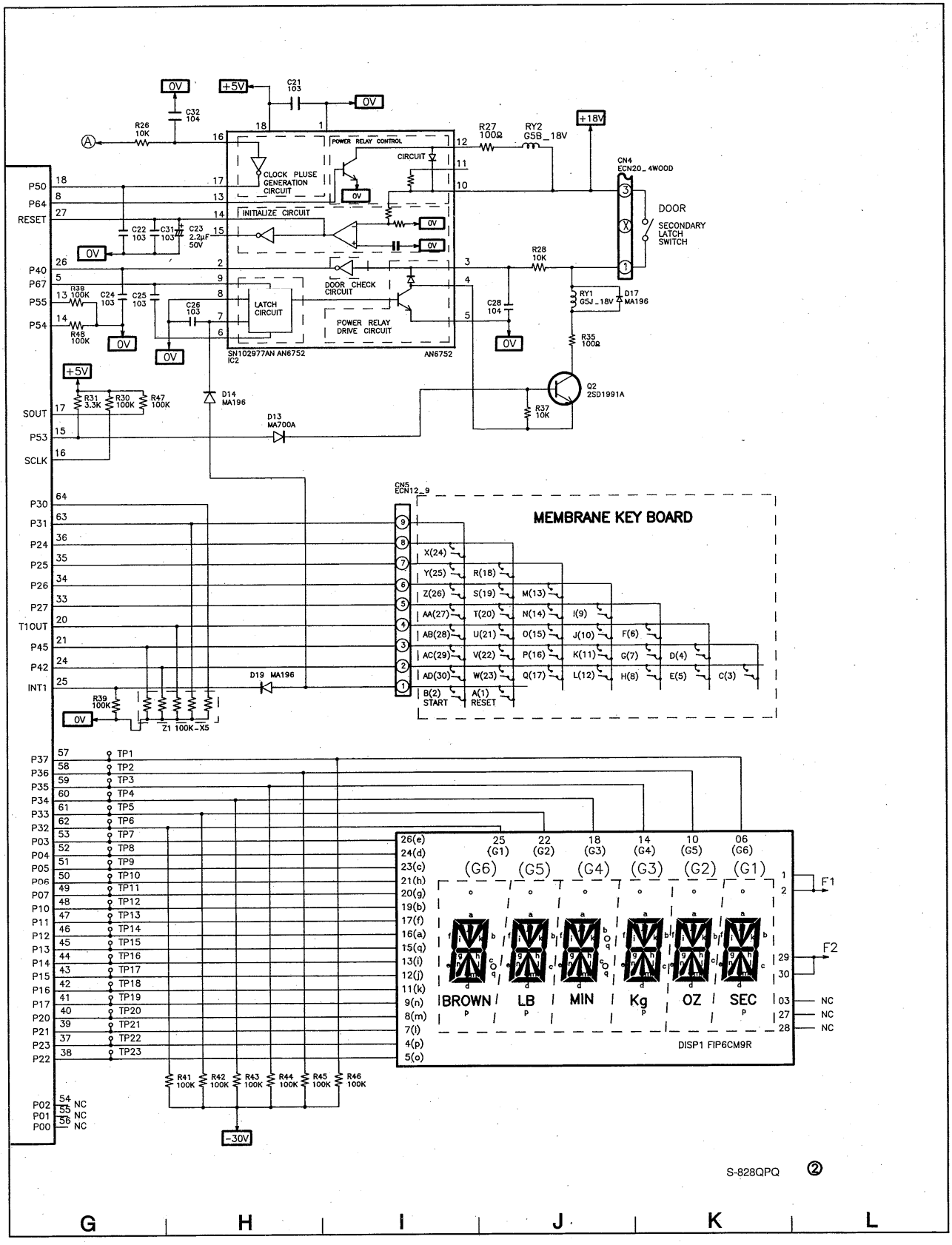
	NN-S576WA	NN-S676BA NN-S676WA	NN-S686WA NN-S786WA
A (1)	STOP/RESET	STOP/RESET	STOP/RESET
B (2)	START	START	START
C (3)	POWER	POWER	POWER
D (4)	TIMER	TIMER	TIMER
E (5)	CLOCK	CLOCK	CLOCK
F (6)	1 SEC	1 SEC	1 SEC
G (7)	10 SEC	10 SEC	10 SEC
H (8)	1 MIN	1 MIN	1 MIN
I (9)	10 MIN	10 MIN	10 MIN
J (10)	S. REHEAT	S. REHEAT	S. REHEAT
K (11)	AUTO 1	AUTO 1	AUTO 1
L (12)	AUTO 2	AUTO 2	AUTO 2
M (13)	AUTO 3	AUTO 3	AUTO 3
N (14)	AUTO 4	AUTO 4	AUTO 4
O (15)	AUTO 5	AUTO 5	AUTO 5
P (16)	AUTO 6	AUTO 6	AUTO 6
Q (17)	AUTO 7	AUTO 7	AUTO 7
R (18)	AUTO 8	AUTO 8	AUTO 8
S (19)	MORE/LESS	MORE/LESS	MORE/LESS
T (20)			
U (21)			
V (22)		▲FWD	▲FWD
W (23)		▼REV	▼REV
X (24)			
Y (25)	AUTO DEFROST		
Z (26)	1.0KG	1.0KG	1.0KG
AA (27)	0.1KG	0.1KG	0.1KG
AB (28)	COOKING GUIDE		
AC (29)	▲FWD	RECIPE PROMPT	RECIPE PROMPT
AD (30)	▼REV	STOP/START	STOP/START

VOLTAGE OF IC1 TERMINALS

IC1 PIN NO.	FUNCTION	TEST CONDITION	VOLTAGE (APPROX.)
27	RESET	NORMAL	5V
26	DOOR CHECK	DOOR OPEN	5V
		DOOR CLOSED	0V
5	LATCH CIRCUIT	BEFORE SETTING	0V
		POWER SELECTED OR DURING OPERATION	5V
6	RY2/OVEN LAMP	DURING COOKING OR DOOR OPEN	5V
15	RY1/MICROWAVE	DURING MICROWAVE COOKING	5V

IC-1 PIN NO.	IC-1 SYMBOL NO.	WAVEFORM
18	P50	16.7mS, 5V, 0V
31	X OUT	0.24μS, 5.5V, 0V
30	X IN	4.5V, 0V
57 I 62	G1 I G6	16.7mS, 2.5mS, 5V, -25V

S-828QPQ ①


MEMBRANE KEY BOARD
POWER RELAY CONTROL
CLOCK PLUSE GENERATION CIRCUIT
INITIALIZE CIRCUIT
LATCH CIRCUIT
DOOR CHECK CIRCUIT
POWER RELAY DRIVE CIRCUIT
SN102977AN AN6752
IC2
AN6752
DOOR
SECONDARY LATCH SWITCH
CN4 ECN20_4WOOD
CN5 ECN12_9
DISP1 FIP6CM9R
BROWN
LB
MIN
Kg
OZ
SEC
S-828QPQ